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ABSTRACT

This program description is one of twenty-one reports dealing with the developmental history of recent educational products. Objectives of the Taba project are to help elementary grade students develop thinking skills, key concept understandings, desired attitudes and values, and cognitive abilities in a sequential manner through process education. The curriculum, generated by a grassroots effort, was prepared by teachers and consultants, under the coordination of the county staff, with contributions by Dr. Taba in the form of a basic conceptual framework for the curriculum and guidelines for the development process. Products of the project are eight teacher's guides, a teacher handbook, and the final report. Research was conducted by an evaluation group to compare the performance of an experimental group using the Taba curriculum with a control group using other curriculum, develop instruments for measuring Taba goals, and analyze the results. Despite some negative findings, "curriculum" pupils make better inferences from data, and use abstract concepts more appropriately. Follow-up mechanisms for teacher dissemination include inservice teacher training, and summer institutes and workshops. (SJM)

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PRODUCT DEVELOPMENT REPORT NO. 19

# THE TABA SOCIAL STUDIES CURRICULUM

DEVELOPED BY THE TABA SOCIAL STUDIES CURRICULUM PROJECT,
SAN FRANCISCO STATE COLLEGE

March 1972

Contract No. OEC-0-70-4892

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Barbara A. Sanderson
Jack J. Crawford

American Institutes for Research
in the Behavioral Sciences

Palo Alto, California

March 1972

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U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

Office of Education
Office of Program Planning and Evaluation

## PREFACE

This product development report is one of 21 such reports, each dealing with the developmental history of a recent educational product. A list of the 21 products, and the agencies responsible for their development, is contained in Appendix D to this report. The study, of which this report is a component, was supported by U.S. Office of Education Contract No. OEC-0-70-4892, entitled "The Evaluation of the Impact of Educational Research and Development Products." The overall project was designed to examine the process of development of "successful educational products."

This report represents a relatively unique attempt to document what occurred in the development of a recent educational product that appears to have potential impact. The report is based upon published materials, documents in the files of the developing agency, and interviews with staff who were involved in the development of the product. A draft of each study was reviewed by the developer's staff. Generally, their suggestions for revisions were incorporated into the text; however, complete responsibility for interpretations concerning any facet of development, evaluation, and diffusion rests with the authors of this report.

Although awareness of the full impact of the study requires reading both the individual product development reports and the separate final report, each study may be read individually. For a quick overview of essential events in the product history, the reader is referred to those sections of the report containing the flow chart and the critical decision record.

The final report contains: a complete discussion of the procedures and the selection criteria used to identify exemplary educational products; generalizations drawn from the 21 product development case studies; a comparison of these generalizations with hypotheses currently existing in the literature regarding the processes of innovation and change; and the identification of some proposed data sources through which the U.S. Office of Education could monitor the impact of developing products. The final report also includes a detailed outline of the search procedures and the information sought for each case report.

Permanent project staff consisted of Calvin E. Wright, Principal Investigator; Jack J. Crawford, Project Director; Daniel W. Kratochvil, Research Scientist; and Carolyn A. Morrow, Administrative Assistant. In addition, other staff who assisted in the preparation of individual product reports are identified on the appropriate title pages. The Project Monitor was Dr. Alice Y. Scates of the USOE Office of Program Planning and Evaluation.

Sincere gratitude is extended to those overburdened staff members of the 21 product development studies who courteously and freely gave their time so that we might present a detailed and relatively accurate picture of the events in the development of some exemplary educational research and development products. If we have chronicled a just and moderately complete account of the birth of these products and the hard work that spawned them, credit lies with those staff members of each product development team who ransacked memory and files to recreate history.

TABLE OF CONTENTS

PREFACE . . . . . ii

LIST OF FIGURES . . . . . v

LIST OF TABLES . . . . . vi

PRODUCT DESCRIPTION

Product Characteristics . . . . . 1

Rationale for Product . . . . . 1

Description of Materials . . . . . 6

Procedures for Using Product . . . . . 8

ORIGINS

Key Personnel . . . . . 13

Evolution of the Product . . . . . 14

Funding for Product Development . . . . . 27

PRODUCT DEVELOPMENT

Management and Organization . . . . . 29

Actual Procedures for Development of Product . . . . . 31

SUMMATIVE EVALUATION

Evaluation Staff . . . . . 36

Summary of Evaluation Efforts . . . . . 36

Field Test . . . . . 43

DIFFUSION

Agency Participation and Diffusion Strategy . . . . . 50

Diffusion Efforts . . . . . 50

ADOPTION . . . . . 54

COSTS . . . . . 55

FUTURE OF THE PRODUCT . . . . . 55

CRITICAL DECISIONS . . . . . 57

REFERENCES . . . . . 61

APPENDIX A: BASIC TIME SCHEDULE FOR THE PROJECT . . . . . 62

APPENDIX B: EXAMPLE OF LEARNING ACTIVITIES . . . . . 64

APPENDIX C: EXAMPLE OF AN EVALUATION EXERCISE . . . . . 65

APPENDIX D: LIST OF PRODUCTS AND DEVELOPERS . . . . . 66

LIST OF FIGURES


| Figure | | Page |
|---|---|---|
| 1 | Major Event Flow Chart . . . . . | 16 |

LIST OF TABLES

Table | Page

1 Successive Revisions of the Product . . . . . 15

## PRODUCT DESCRIPTION

### Product Characteristics

**Name**

The Taba Social Studies Curriculum

**Developer**

The Taba Social Studies Curriculum Project, San Francisco State College

**Distributor**

Addison-Wesley Publishing Company

**Focus**

The primary focus of the Taba Social Studies Curriculum is on the development of thinking skills, general concepts, selected attitudes and values, and academic and social skills related to the social studies area.

**Grade Level**

Grades 1 through 8

**Target Population**

All students capable of learning in typical academic settings

**Materials**

A set of Teacher's Guides for grades 1 through 8 outlining the subject content and classroom activities for the curriculum

### Rationale for Product

**Long Range Goals of Product**

The goals of the curriculum were established during the early stages of development in Contra Costa County, and these goals provided the framework for developing the curriculum. They have not been substantially changed in subsequent revisions. The major goals of the curriculum include:

1. The development of a number of specified thinking skills
2. The acquisition, use, and understanding of important key concepts
3. The formation of desired attitudes and values and the examination of attitudes and values already possessed
4. The curriculum also aims at developing the requisite academic and social skills needed to meet the above goals.

Goals and Objectives of Product

The first major goal of the curriculum is the development of thinking skills. The teaching and learning of cognitive skills are a major focus of the curriculum and three key cognitive tasks have been identified: developing concepts, inferring and generalizing, and applying generalizations. For convenience, the curriculum includes separate learning activities and teaching strategies for developing each of these skills, although it is recognized that they interact in the thinking process.

Another major goal of the curriculum is to help students acquire, understand, and use important general concepts which are broadly applicable to the social studies areas. Thus the emphasis is on content as well as on the thinking process. The curriculum does not focus on specific facts, such as names, dates, or events, but rather emphasizes key concepts and main ideas. The concepts and main ideas are developed using factual information called content samples. The key concepts are drawn from the social sciences, history, and geography and are used to organize the large amount of information dealt with in the curriculum. The concepts which were selected to provide the framework for the content of the curriculum are casuality, conflict, cooperation, cultural change, differences, interdependence, modification, power, societal control, tradition, and values. The aim of the curriculum is to develop these concepts at each grade level at successive levels of abstractness, generality, and complexity, thereby creating a sequential or spiraling concept development. The student is provided repeated experiences with one concept in a variety of contexts.

The curriculum is also designed to develop selected academic and social skills which are needed to achieve the three cognitive skill goals. Throughout the curriculum opportunities are provided to practice various skills, including the ability to: read selectively; take notes; interpret and make maps; read and make timelines, charts, and graphs; work in committees; engage in group research; participate in class discussions; learn to ask relevant questions; organize information around study questions; and develop individual and group plans for solving a variety of problems. Thus the curriculum does not neglect the development of certain skills which are stressed in other social studies programs.

Behavioral Objectives

A list of behavioral objectives derived from these goals was developed as part of the 1965-1969 project. These objectives are stated in terms of observable behaviors, followed by examples of specific behaviors. A statement of rationale explains why the objective is important, how it is related to other outcomes, and how it can be conceptualized. The objectives are similar throughout the eight grades. They do not include a precise level of proficiency to be obtained, but students are expected to perform at an increasing level of proficiency as they progress through the curriculum. The following is an illustration of a typical cognitive objective together with examples and rationale:

> Given a detailed set of facts, the student states valid generalizations that he had not been given previously, and, when asked, provides the sources and limitations of the generalizations. Examples of facts and acceptable generalizations based on them that students might state are as follows:

| KINDS OF FACTS GIVEN | EXAMPLES OF GENERALIZATIONS |
|---|---|
| The kinds of things done by various groups of people to help this country get started. | The Afro-Americans did a lot to get things going by doing much of the hard work that had to be done for many, many years while they were slaves. |
| Behavior of other Americans toward Afro-Americans during time of slavery and today. | Part of the Afro-American's problem is that some people today think of them in much the same ways as when they were slaves. |
| Reasons why various immigrants groups came to this country. | In many cases the people who left their own country to come and live here were unhappy about how things were run in their own country. |
| Similarities in customs and believes in this country and in England together with ways in which attitudes of people in this country toward England have changed since the War for Independence. | After having a long time to forget the bitter feelings of the war, the things people in the two countries had in common sort of drew them together again. |

*Rationale:* Ability to form generalizations is one of the skills that is emphasized in this curriculum and is

important in relation to other thinking skills such as the formation of hypotheses. Making generalizations is also an important aspect of the development of attitudes.

A representative affective objective, together with behavior examples and rationale, is:

> Given a discussion setting or other situation in which students can express their ideas without censure or ridicule, the student makes statements that describe what the teacher judges to be the probable feelings or other thoughts of people studied in the various units of the Fifth Grade program. Statements indicateive of the desired attitudes are:
>
> "I'll bet the early settlers felt very excited when they saw a ship from their old country approaching."
>
> "I wonder if some of the former slaves might have felt kind of lost after they were freed, even though they were thankful not to be slaves any more."
>
> "An immigrant from a farm in another country probably would feel very confused if he landed in a big city like New York City."
>
> "Some of the settlers who were having a hard time making a living probably didn't think schools were very important."
>
> "People in the English government must have been very angry at the American revolutionary leaders because the revolution resulted in loss of one of their possessions."
>
> "Some of the Indian ways seem strange to us, but no more so than our ways would seem strange to them."
>
> *Rationale:* These kinds of behaviors represent an attitude of empathy. Such an attitude is important because it is part of the decentering process. That is, it is a step in the direction of overcoming the self-centeredness, which, according to Piaget and others, characterizes much of the behavior of the young child. Unless the child has empathy for the thoughts and feelings of others, he will have difficulty understanding and applying generalizations pertaining to cooperation and to resolution of conflicts among individuals and groups.

## Philosophy and Theories Supporting Product

Hilda Taba brought to this product a legacy from the research and theories of a number of psychologists. These included: (1) the work of

Jerome Bruner and collegues on concept formation (1956), and particularly his notions of the growth of internal representations, e.g., enactive, linear, and symbolic, as fundamental to cognitivie development (1964); (2) Vyotsky's earlier studies of children's thought processes and particularly his notions of how concepts are classified or grouped (1962); (3) Gallegher's studies of classroom interaction (1965) which were based upon Guilford's structure of intellect model (1960); (4) the literature on problem solving represented by the work of Duncker (1945) on organic solutions and Wertheimer's studies of productive thinking and teaching (1945).

The most influential effect was derived from Taba's study of Piaget (1953) (Flavell 1957). The orderly sequence of cognitive growth, the emphasis upon a sequence of stages each requiring prerequisite development from prior stages and proceeding to more abstract operations and more complex structure have been transposed throughout the Teacher's Guides.

From these and other supporting studies--primarily from psychology--general assumptions were derived which consistently shaped the goals and development of the product (Taba, 1966). These assumptions are:

1. That thinking can be taught if the requisite skills are identified and assisted.

2. The development of thinking can be accelerated in low IQ students as well as others.

3. To learn thinking, students must be involved in the processes of thinking, not just end products of thinking derived from others.

4. Thought processes evolve through the kind of sequence and phases described by Piaget. This holds not only across ages but as a task sequence for the mastery of thinking skills.

5. Teaching strategies must follow a sequence similar to the developmental stages of thinking. (The developmental stages being primarily those of Piaget.)

6. In the classroom, intake of information and the cognitive organization of information are major ways in which the key processes of assimilation and accommodation (from Piaget) appear.

7. Educational programs must carefully delineate the psychological processes of thinking from the rules of logic.

Hilda Taba applied the findings and the theories of cognitive psychologists to classroom learning. She has transposed research and theory into a set of instructional practices and teaching strategies.

## Description of Materials

### Organization and Format

The format and general appearance of the revised guides follow the pattern of the earlier version. Each guide presents one year's program with an overall theme and consists of from three to eight units, with each unit focusing on one main idea. The titles of the eight guides are:

Grade 1: The Family

Grade 2: Communities Around Us

Grade 3: Four Communities Around the World

Grade 4: Our State . . . A Changing Society

Grade 5: United States and Canada . . . Societies in Transition

Grade 6: Middle and South America . . . Societies in Transition

Grade 7: Western Civilization . . . Perspectives on Change

Grade 8: United States -- Change, Problems, and Promises

The guides are used only by the teacher and are generally about 150 to 250 pages in length, the bulk of which is a description of recommended learning activities and notes to the teacher.

### Content

To organize the content in each year's guide, six or eight main ideas were derived from the key concepts described previously. These main ideas are broad generalizations that can be applied to a variety of specific situations. Often they are repeated in similar forms at different grade levels. Each of the four to six units within each guide centers around one main idea and also includes an organizing idea, narrower in scope, which relates the main idea of the unit to the specific content of the unit. For example,

these are some of the main ideas and organizing ideas used in the fifth grade guides:

MAIN IDEA: THE PHYSICAL AND CULTURAL RESOURCES OF AN AREA ENCOURAGE SPECIALIZATION IN THE USE OF LAND.

*Organizing Idea: America's many different environments permit the development of many different resources.*

MAIN IDEA: CONFLICT MAY DEVELOP AMONG GROUPS WHEN GOALS AND EXPECTATIONS DIFFER.

*Organizing Idea: Differing views of the rights of colonists contributed to the break with Great Britain.*

The activities in the units are designed to encourage students to move inductively towards ideas approximating the main or organizing idea, although the curriculum emphasizes that the teacher should not expect students to express the ideas exactly as they appear in the guide.

Samples of specific facts, or content samples, are used in the curriculum to explain, illustrate, and develop the main ideas. Content samples are selected which provide adequate development of the main idea and which are appropriate for the grade level of the students. Often different content samples can be used to develop the same idea, and teachers who understand the function of facts in the curriculum are able to substitute one set of facts with another when they feel it is appropriate. Students are not expected to memorize specific facts, but rather are encouraged to use the facts to inductively develop ideas.

Thus, to meet the second goal of the curriculum, the acquisition, use, and understanding of important elements of knowledge, the curriculum developers have identified a group of important general concepts and used these as a basis for organizing specific facts. Subject matter content is an important part of the program, but students are expected to learn main ideas, not collections of facts.

Cost of Materials to User

Each teacher guide costs $4.05[1] (approximately). As each guide is keyed to a specific grade level, the total cost for a set of the guides for grades

[1]The current materials are sold by both Addison-Wesley Publishing Company and JSZ Publishers of Hayward, Calfornia, in slightly different formats and prices.

1-8 is $32.40. Optional supplementary materials include Dr. Hilda Taba's Teaching Strategies and Cognitive Function, $3.50, and the Final Report of The Taba Curriculum Development Project in Social Studies, $7.50.

## Procedures for Using Product

### Teacher and Learner Activities

The learning activities are selected and organized to meet the objectives of the curriculum. Teacher directed discussion is a frequent activity, but a variety of other activities are also included, such as reading, gathering information, making reports, drawing, role playing, discussing pictures, making charts, making and using maps, and writing letters. The curriculum suggests a combination of individual, small group, and whole class activities. The amount of time spent on different types of activities depends on the teacher and the students, since the teacher sets the pace according to the needs of the students and can substitute other activities for those in the guide as long as they have the same intent.

The activities are organized into openers, development, and conclusion. The openers introduce the topic to the students. Generally, the opener involves the students in an activity or game in which the students are asked to draw on what they already know about the topic. The activity allows the teacher to assess what experiences and information the students' bring to the unit and provides an opportunity for the students to practice certain cognitive skills, such as concept formation. The development activities are the bulk of the unit and are generally arranged in an inductive sequence, beginning with descriptive facts and proceeding with materials and tasks which require a higher degree of abstraction. Students are provided with opportunities to both take in new information and also to process information--to organize and interpret data and to express ideas. The activities are arranged in a sequential order so that each activity builds on what has been previously learned and leads to more challenging activities. The concluding activity which ends the unit provides an opportunity for students to draw together what they have learned in the unit and to formulate some general statement for the unit.

In the learning activities designed to develop concepts, students are asked to list items, group items on some basis, label the groups, and then

regroup the items. The teacher directs their activity by asking a sequence of questions, generally in this order:

- What do you see here?
- Do any of these items seem to belong together?
- Why would you group them together?
- What would you call these groups you have formed?
- Could some of these belong in more than one group?
- Can we put these same items in different groups?

(Wallen et al, 1969, Table 2.1)

The students perform these operations themselves; the teacher provides focus for their activities.

In the learning activities for inferring and generalizing, students follow four main steps: looking at data, explaining the data, inferring similarities and differences in order to develop generalizations, and checking the generalization against the data. The teacher asks questions such as:

- What did you notice?
- What differences did you notice?
- How do you account for these differences?
- What does this tell you about . . . ?

(Wallen et al, 1969, Table 2.2)

The teacher helps students recognize the tentativeness of generalizations with questions such as, "Can you think of a situation where this would not apply?"

In the third cognitive task, applying generalizations, students are asked to apply generalizations to a new situation, to use what they already know to predict consequences. Often this activity comes at the end of a sequence of learning activities. The teacher asks:

- Suppose that a particular event occurred given certain conditions, what would happen?

  What makes you think that would happen?

- What would be needed for that to happen?
- Can someone give a different idea about what would happen?
- If, as one of you predicted, such-and-such happened, what do you think would happen after that?

(Wallen et al, 1969, Table 2.3)

The students are encouraged to: make inferences, state explanations, identify relationships, identify facts needed to support inferences, and make new inferences; the teacher asks students to support their statements with evidence and reasoning. Such a discussion offers possibilities for creative thinking and teachers are cautioned not to squelch divergent thinking as they challenge the students to support their ideas.

The curriculum also deals with feelings, attitudes, and values. Learning activities and sequences of questions are included in the curriculum to provide the students with practice in:

(1) exploring feelings--their own and others,

(2) considering various approaches to solving disputes among persons and groups, and

(3) analyzing the values held by people, including themselves.

(Wallen et al, 1969, P. 25)

The teaching strategies used in achieving the affective goals are similar to the strategies used in developing thinking skills, both depending mainly on teacher directed discussion. However, in the discussions more emphasis is put on maintaining a supportive atmosphere. The teachers attempt to be sensitive to student reactions and to encourage students to involve their own feelings, attitudes, or values.

As a vehicle for exploring feelings, students are presented with a situation involving emotional reactions of people and the teacher encourages discussion of the situation with a series of questions. Students are asked to assess how others feel in a particular situtation, to compare their feelings with those of others, and to explore the reasons for their own feelings and others' feelings. In this way students are helped to empathize with others and to learn more about the nature and causes of people's behavior, including their own.

To explore interpersonal problem solving, students are presented with a situation involving a conflict, such as a playground dispute. They are asked to describe what happened and to suggest solutions and consider their consequences. Then they recall similar events in their own life, evaluate how they acted in the situation, and consider possible alternatives they could have followed. In such discussions, the teachers are asked not to make judgments on the behaviors students suggest, but rather to move the discussion on to considering consequences and alternatives. Through such dsicussions students consider various alternative ways of dealing with conflicts which they can apply to situations in their own life.

The strategy for analyzing values requires the identification and comparison of values as reflected in behavior. First, students describe behaviors in an individual or a group which they have learned about. For example, in a fifth grade unit which includes a section on migrant workers, the class discusses a book in which the parents in a migrant family must decide whether to send their children to the fields to pick beans or to school. Students in the class are asked to explain the reasons for what the parents do and what these reasons indicate about what is important to the parents. Students also consider what they would do in a similar situation and what their behavior would indicate was important to them. Through this discussion students become aware of the variety of values people have and how they relate to their own values.

Teacher Instructions

The guides present detailed lesson plans which outline the procedures to follow for each activity and references to instructional materials to be used with the activities. The guides also include notes to the teacher which explain the purpose of specific learning activities and the emphasis of a sequence of activities, and which suggest appropriate points of evaluation and additional activities. See Appendix A of a sample page from a seventh grade guide for an example of the lesson plans.

An additional source available to the teacher is the Teacher's Handbook for Elementary Social Studies which explains the objectives, organization, and development of the curriculum. The handbook also contains information on how to use the curriculum, including a section on teaching strategies. The handbook was designed to help teachers understand the theory of the curriculum and use appropriate teaching strategies. Teachers new to the

curriculum are encouraged to follow the curriculum guide closely, but experienced teachers who understand the function of the various parts of the curriculum are allowed flexibility in substituting content samples, learning activities, and evaluation exercises.

Provisions for Parent/Community Involvement

No specific provisions for parent/community involvement have been made. The materials, however, clearly describe the differences between the Taba curriculum and conventional approaches so that parents can be informed.

Special Physical Facilities or Equipment

No special facilities or equipment are required.

Recommended Assessment Techniques for Users

The evaluation exercises which are included at various points in the curriculum guides are another major element of the curriculum. These exercises help teachers judge student performance and assess how effectively objectives are being met. Each evaluation exercise is related to the specific objective or objectives it is designed to measure. The evaluation exercises are process- rather than content-oriented. They generally involve the teacher in observing and recording information, either by keeping tally of students' remarks during a discussion or by having students write down their responses and then analyzing the responses later. For example, to assess a student's ability to form generalizations, the teacher might record and rate the variety of generalizations suggested in a discussion and the abstractness of these generalizations. To assess students' ability in grouping and labeling, the teacher can analyze student responses using criteria such as style of grouping, quality of grouping, abstractness of labels for groups, and flexibility in regrouping. A sample of an evaluation exercise appears in Appendix B in which the teacher analyses student responses in a concept development exercise on the basis of flexibility and abstractness. Generally, detailed descriptions of exercises appear in an abbreviated form with a reference to the appropriate model. This type of evaluation exercise is different from the content-oriented evaluation techniques teachers generally use.

There is, however, no documented evidence that teachers who use the guides make use of these evaluation exercises. In the current format the

directions for the exercises are vague and the administration of the exercises is time consuming. But, it is significant that at attempt was made to include process-oriented evaluation techniques in the curriculum. The techniques may prove to be a valuable tool for improving instruction through assessing student progress.

## ORIGINS

### Key Personnel

Hilda Taba, of course, provided the conceptual framework. She was consultant to the Contra Costa County Schools during the development of the first version. Until her death, Dr. Taba directed the development of the revised guides.

Alice Duvall and Mary Durkin, along with other members of the Contra Costa County staff, played crucial roles in the interpretation of Dr. Taba's ideas to teachers and in coordination with the teaching staff who were developing the first version. Their contribution to the original version was substantial.

Norman Wallen assumed directorship of the revision effort after Dr. Taba's death. Dr. Wallen, who had received his Ph.D. in Psychology from Syracuse University, had 10 years experience before going to San Francisco State College to teach and work on the revision project. He had directed other research projects for the U.S. Office of Education. Mary Durkin, on leave of absence from Contra Costa County, played a major role in the curriculum development. Jack Fraenkel, who had six years of teaching experience and a Ph.D. in curriculum development, assumed a major role during the last three years of the project. Alice Duvall of the Contra County staff served half time the first year.

Enoch Sawin, a staff member at San Francisco State College, provided assessment and evaluation input. Anthony J. McNaughton, who was interested in Dr. Taba's research, obtained a leave of absence from the University of New Zealand and played a crucial role in test development.

Many other teachers, administrators, and staff in Contra Costa County and other cooperating districts contributed substantially to the project.

## Evolution of the Product

### Ideas and First Version

In the early 1950's administrators in Contra Costa County became aware of a need to improve the elementary social studies curriculum. The county had been using content-oriented resource guides which contained activities the teachers could pick out "cafeteria style" and use in their classes. The county had the notion that they wanted a new type of curriculum, a process oriented curriculum, but did not know how to go about developing one. The staff brought in two consultants, but neither of them was able to provide the county staff with the direction they needed and the staff was considering dropping the project and purchasing a curriculum.

Then, in 1953, one of the county staff members heard Hilda Taba speak at a convention for the Association of Supervisors of Curriculum Development and felt that Dr. Taba had the process orientation they were searching for. At that time Dr. Taba was on the staff at the University of Chicago, but she was planning to join the faculty at San Francisco State College the next year. The Contra Costa County staff asked her to serve as ongoing consultant to the county in the development of a social studies curriculum. Dr. Taba had already established her professional reputation and had published books and articles on curriculum, evaluation, and human relations. She had been a student of Dewey and was influenced by his ideas. Her views on curriculum development had been influenced through her work on social studies evaluation with Ralph Tyler on the Eight Year Study (1936-1942). She had become known for her work in the area of human relations and served as director of a six-year curriculum development project in Intergroup Education (1945-1951).

Dr. Taba had already developed ideas on how to conceptualize the curriculum development process and her work at Contra Costa County provided an opportunity for her to test and develop her conceptual system and to develop a model for curriculum development. The project was a blending of theory and practical experience as Dr. Taba contributed a conceptual scheme and guidelines for curriculum development and the county curriculum staff communicated these ideas to the teachers and worked with the teachers to develop a curriculum.[1]

---

[1]Note: The section, Philosophy and Theories Supporting Product, above provides further descriptions of the sources of ideas.

The major events in the development of the Taba Social Studies Curriculum are shown in Figure 1, the Major Event Flow Chart, which starts on the following page.

Contra Costa County--A Grassroots Development Effort

The first version of the curriculum was developed from 1954 to 1965 by the Contra Costa County School Department in cooperation with school districts in the county. An overview of the successive revisons of the product is shown in Table 1 below. Contra Costa County is located in northern California near San Francisco and is largely white middle class, but includes a sizable minority population of blacks, Mexican-Americans, and orientals. In 1960 the school population in the county was slightly over 100,000.

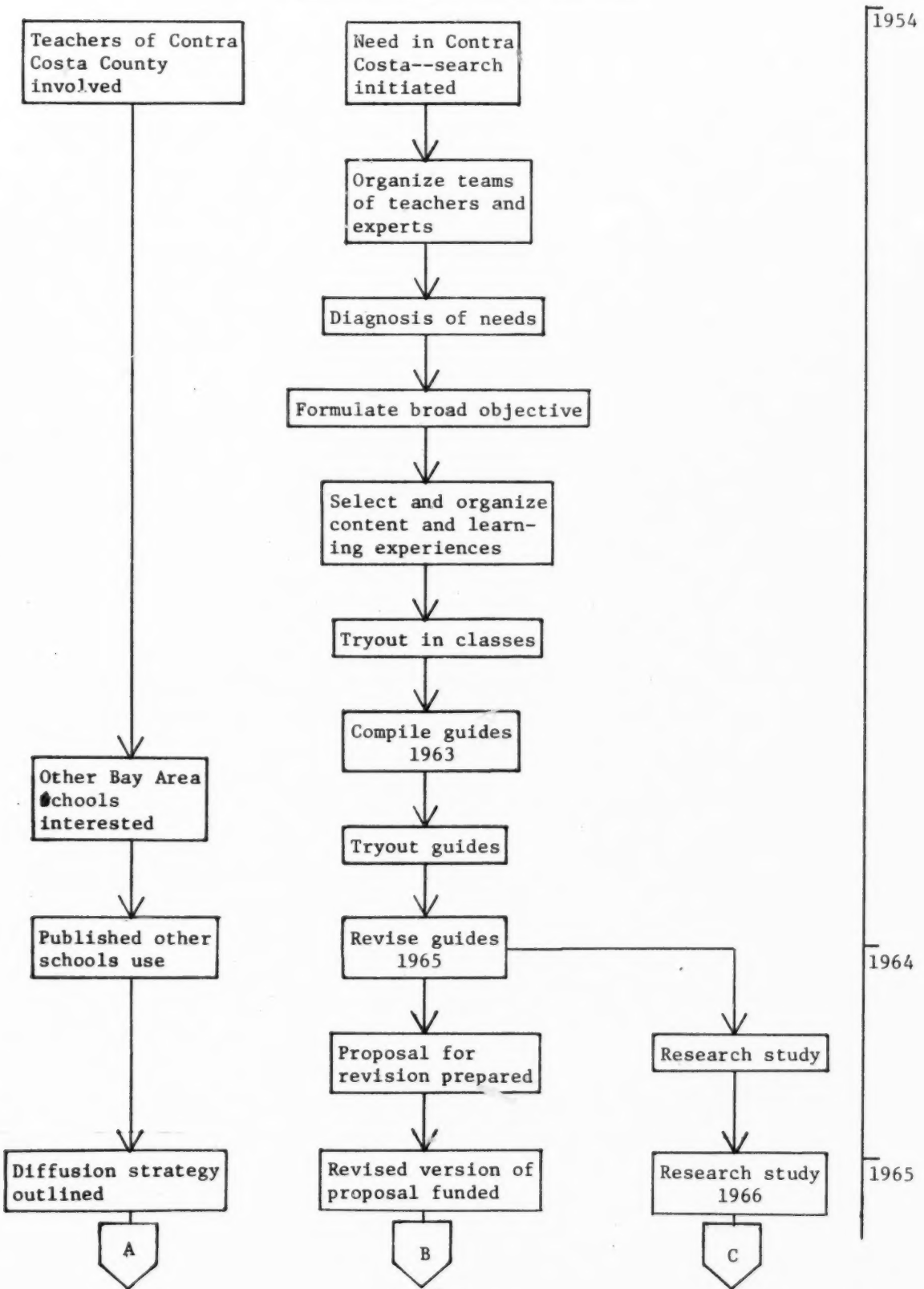
Table 1

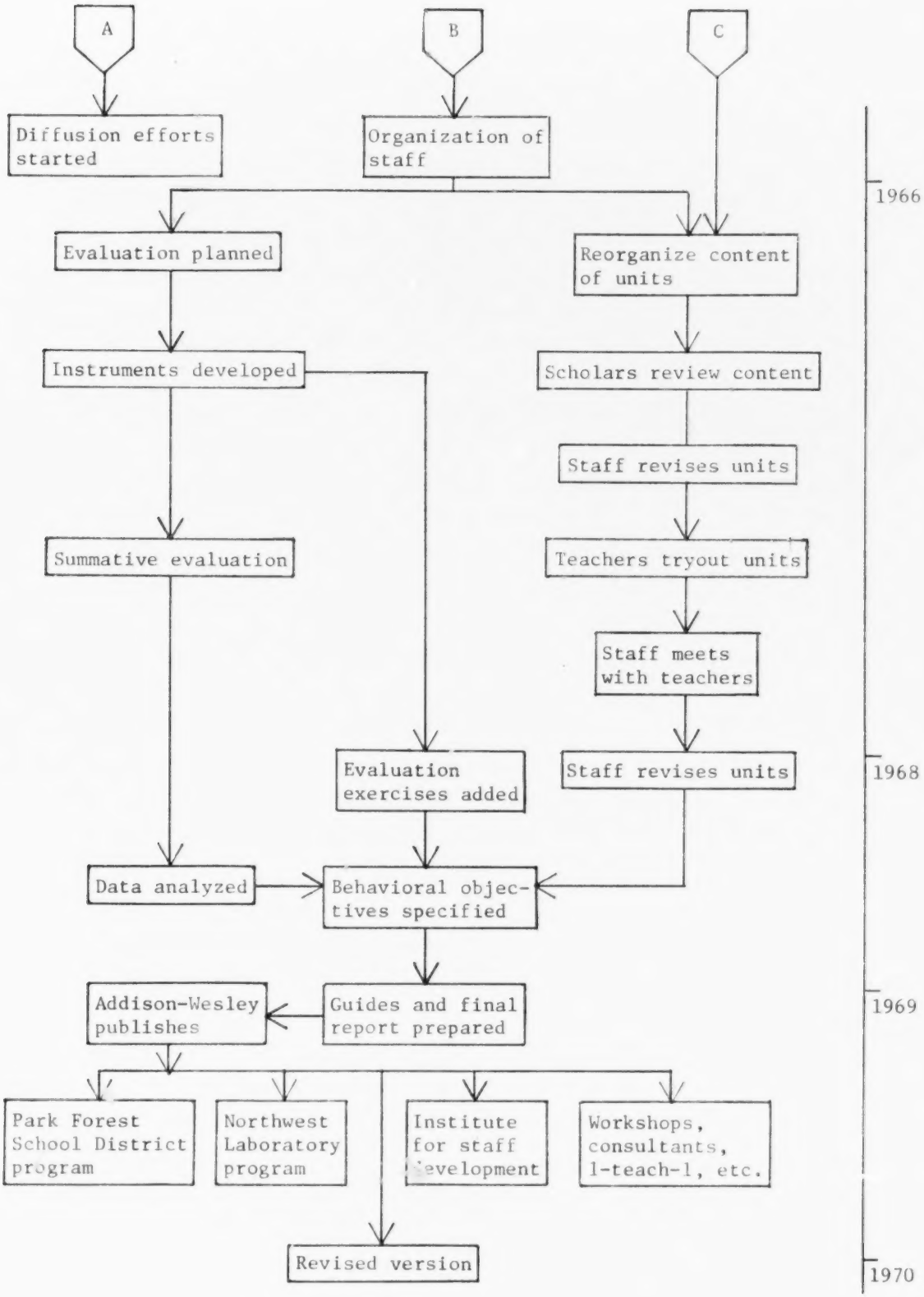
Successive Revisions of the Product

| Version | Development Period | Product | Developer |
|---|---|---|---|
| Original | 1954-1965 | Teacher's Guides, Grades 1-6 | Contra Costa County Department of Education |
| Revised | 1965-1969 | Revised Teacher's Guides, Grades 1-8 | San Francisco State College |
| Future | 1966-1972 | Student textbooks for elementary grades, teacher's editions of textbooks, and supplementary multimedia materials | Addison-Wesley Publishing Company |

Over the next 10 years the Contra Costa Social Studies Curriculum evolved. During this period the development of the curriculum was viewed as a county effort and the materials were called the Contra Costa County Social Studies Guides. Dr. Taba was the ongoing consultant and came to Contra Costa County about once a month. She wanted to develop local leadership and spent much of her time training the county staff who had major responsibility for developing the curriculum. When the project began, 10 curriculum supervisors were involved; but after the county

Figure 1. Major Event Flow Chart




A
B
C
Diffusion efforts started
Organization of staff
1966
Evaluation planned
Reorganize content of units
Instruments developed
Scholars review content
Staff revises units
Summative evaluation
Teachers tryout units
Staff meets with teachers
Evaluation exercises added
Staff revises units
1968
Data analyzed
Behavioral objectives specified
Addison-Wesley publishes
Guides and final report prepared
1969
Park Forest School District program
Northwest Laboratory program
Institute for staff development
Workshops, consultants, 1-teach-1, etc.
Revised version
1970

office was reorganized, fewer people were involved, and by 1965 only two people were responsible for the curriculum--Mary Durkin and Alice Duvall. Mary Durkin was a key figure throughout the development of the curriculum. She had taught for many years in a variety of settings and had a good understanding of the classroom situation and could effectively translate Dr. Taba's ideas to teachers. She later worked on the 1965-1969 revision project. She and Dr. Anthony McNaughton worked for Addison-Wesley as general editors in the development of their forthcoming edition of the curriculum. Alice Duvall has also made important contributions. She was an experienced teacher and had been a member of the county staff for many years. Mary Durkin, Alice Duvall, and other members of the county staff coordinated the development of the Contra Costa guides and interacted with a large number of Contra Costa County teachers in developing and trying out the guides. The teachers played a major role in the development of the guides, but it was the members of the county staff who actually wrote the guides. County staff members also consulted experts in education and social science at appropriate points in the development process on the content or organization of the curriculum.

The consistent support of the Contra Costa County School Department and the school districts in the county was important to the success of the project. The School Department did not put a time limit on the project or pressure the staff to complete the curriculum, but allowed for an extended period of development. No cost estimates are available on the actual investment of the county in the project, but it is doubtful if it was a major investment as compared to the amount spent on many curriculum development projects. The county did provide funds for consultant fees, supplies, and some other expenses, but generally the work was done on a shoestring budget. Some school districts provided money for substitutes so that participating teachers could have release time.

Development of the First Version of the Guides

Both Dr. Taba and the county staff wanted to involve teachers in the development procedure. From the beginning of the project Dr. Taba intended to build mechanisms for dissemination into the development process, and she believed that teachers were the best disseminators of new methods. She wanted teachers to work on the development who would also be effective disseminators, who were accepted by their fellow teachers, and who communicated

and worked well with others.

To recruit teachers, the county staff talked with school principals and asked them to identify teachers who could develop an idea, receive ideas well from others, and in turn be listed to by others. These teachers did not have to be the outstanding teachers in the school, but they did have to be the kind of people to whom other teachers would listen. The principals usually cooperated although there were exceptions. After the guides were completed, one principal looked at the front page of a guide where the names of the teachers involved in the development were listed and said, "Oh! You'll have to take off this face sheet. So-and-so's name is on it and nobody will try it with her name on it!" But, generally, the principals cooperated and this method of selection proved effective.

Once teachers were identified they were asked if they would like to participate. At this point another "ground rule" in the development process was established by Dr. Taba--"no flag-waving." Dr. Taba did not want to arouse unrealistic expectations about the curriculum. Of course, Dr. Taba and the county staff were excited about the prospect of developing a new curriculum, but they believed that teachers would spread the word if the curriculum was good. So, when the teachers were asked to work on the curriculum, they were given no promises that the new curriculum would solve their educational problems , but rather a hope to develop an improved social studies curriculum through an approach that was different from what they had used in the past.

The number of teachers involved varied from grade to grade, but in most cases a team of about five teachers worked at each grade level. The teachers generally worked together to plan a guide, but sometimes a teacher who had an idea she wanted to try worked independently to develop her own units. In one case, a program developed independently by a teacher became one of the most successful guides. The original plan was to develop units for grades one through eight all at once, but the county staff found they did not have time to effectively coordinate that much work. They revised the plan and concentrated on developing the curriculum for grades one through three. When these guides neared completion, work on the other guides was begun. The state framework was used as a basis for the theme for each year's guide. The teachers started with the theme, developed main ideas, and then planned inductive learning experiences to develop those

main ideas. Then they tried out the lessons in their classrooms and discussed the results with the county staff, Dr. Taba, and the other teachers. Principals and other administrators generally supported the teachers and some schools gave the teachers release time to work on the curriculum. Despite the amount of extra work involved, teacher morale was high; and none of the teachers dropped out, either in the development stage, the tryouts, or in the later research studies.

The county staff worked closely with the teachers in the development process and functioned as a link with Dr. Taba and other resource people who were consulted in specific areas. Particularly in the early stages of the project, Dr. Taba spent most of her consultant time training the county staff to perform these roles. For example, in the early years Dr. Taba visited schools and talked with individual teachers about the reactions of students to particular lessons. Mary Durkin accompanied her and took notes during the interviews, and later Dr. Taba and Mary Durkin discussed the notes together. Mary Durkin soon became responsible for obtaining teacher feedback and compiled and summarized information on classroom tryouts for Dr. Taba to review.

In working with the teachers, the county staff provided direction, reacted to ideas, searched for appropriate materials, and assisted in whatever way they could. To keep the teachers focused on a main idea, the staff asked the teachers, "After the students have forgotten all the dates and names, what idea do you hope will be left?" Then the staff presented these main ideas to content specialists--economists, political scientists, and others in the social sciences--and asked them to react to the ideas. They asked questions such as, "Is this idea a valid generalization? Is it too broad or too narrow? Is it significant? How can it be improved? Then the staff advised the teachers of the consultants' reactions and helped them revise, systematize, and organize the main ideas. The staff also helped the teachers plan and sequence activities to develop the main ideas and further the skill goals of the curriculum.

Tape recordings of classroom activities were used extensively in the development of the curriculum and also in later tryouts and revisions. The tape recordings provided valuable feedback on the effectiveness of specific activities in the classroom. The staff listened to and edited the tapes and then discussed them with Dr. Taba and the teachers. Dr. Taba could

recognize the student behaviors that reflected the thinking skills she wanted students to develop, and the tape recordings provided a means for identifying the conditions which were associated with these types of behaviors. The tape recordings were also helpful in the selection of content for the guides. For example, in listening to the tapes it became apparent that the main ideas in the second grade unit on the neighborhood were similar to those in the third grade unit on the community and that the level of thinking was about the same for both grades. As a result, a unit on communities of different cultures was developed for the third grade which introduced new concepts and ideas.

An unusual aspect of the development procedure was that the teachers were never asked to write down their ideas. The main reason for this was that Dr. Taba wanted the teachers to feel free to criticize and to say what was effective and what was not effective in the classroom. She thought that if the teachers were asked to write out their ideas they might become personally committed to what they had written and react defensively to suggestions for change. So, the teachers thought of ideas and tried them out in the classroom while the staff collected the ideas of many different teachers, organized and sequenced them, and wrote them down in the form of a lesson plan. The staff did find they became involved with what they had written and that it was difficult not to take criticism of a sequence personally and felt that not having the teachers write the materials was probably wise. But it also put a heavy responsibility on the staff. This work often had to be done in addition to their regular duties as curriculum supervisors and many evenings, weekends, and vacations were spent working on the social studies program.

Other Teachers in the County Try Out the Guides

During the development process the staff working on the curriculum kept the administrators and other county staff personnel informed of their progress. As the guides were developed they arranged for about 20 other teachers in the county to try out each unit to provide feedback for revising the guides. These teachers were selected to represent a broad range of teaching philosophies and they taught students of different socio-economic backgrounds, abilities, and races. In arranging for tryouts, the staff tried to have two teachers in the same school using the same guide

so they could share their experiences and provide support for each other. The staff discussed the program with the school principal and explained that the teachers were trying something new and that they would probably have some failures, and that it was important for the principal to be understanding and supportive. The staff worked closely with the teachers in the implementation of the curriculum and discussed specific lessons with teachers and made tape recordings of classroom sessions.

During the tryout stage, the material was in rough, mimeographed form. After the tryout the staff read their notes from discussions with teachers and listened to the response of students on the tape recordings of classroom sessions and then rewrote the lessons and compiled them into teacher's guides. These guides were generally 100 to 150 pages in length and consisted primarily of learning activities and references to books and other materials which could be used in these activities but did not include student materials. During the early 1960's the staff continued to work with teachers to revise the guides for grades one through six. During this revision process Dr. Taba and the staff learned certain things about the curriculum. For example, the importance of including questions for the teachers to ask became apparent. During tryouts the materials included specific questions for the teachers to ask. The teachers felt they were not necessary in the guide, that they already knew how to ask questions, so the questions were not included in the first versions of the guides. Later, as part of a research study, teachers were asked to develop question sequences about films the children were to discuss. They became aware of how long it took to develop good questions. As a result of this and other experiences, the questions were put back in the next version of the guides.

Other Districts Begin to Use the Guides

When the guides were completed and printed, they were officially adopted for use in Contra Costa County schools. They also began to be used systematically in the nearby Berkeley School District and Alameda County and by individual teachers in other districts. Dr. Taba believed that educators should build on the work of others and was pleased that there was interest in the materials. There were many requests from other districts for teacher training sessions. When the staff found they could not handle all the requests from other districts for workshops, Contra Costa County

teachers began to serve as consultants in other districts. This allowed them to develop their leadership skills and also gave them recognition for their accomplishments. The teachers involved in the development played an important role in disseminating the curriculum.

The curriculum was an outgrowth of a grassroots effort. School personnel felt a need for a better elementary social studies program and the county staff coordinated the efforts of teachers and consultants to prepare a curriculum. Dr. Taba contributed the basic conceptual framework for the curriculum and guidelines for the development process while the county staff worked with teachers and other consultants to apply this approach to the actual classroom situation. People from outside the county became interested in the curriculum and it began to be used on a limited basis, but the curriculum as developed in Contra Costa County was difficult to implement. There were no student materials, only references in the guides to a variety of instructional materials which could be used in the lessons, and a teacher adopting the program had the difficult task of gathering student materials from libraries or other sources. Another problem was that a teacher needed training to implement the curriculum effectively. In addition, the content of the guides needed revision and evaluative techniques were not included. The guides were prepared by a small staff with limited resources who often wrote the guides in addition to their duties as full time curriculum supervisors. The guides needed to be reviewed for overall organization and consistency and were not polished enough to be implemented on a widespread basis in schools.

A Curriculum Development Model

In 1962 Dr. Taba published a book, Curriculum Development: Theory and Practice, in which she outlined a theory of curriculum development which she had developed on the basis of her experiences in Contra Costa County and other curriculum projects. The book, over 500 pages in length, discusses the function of schools in our society, the implications of learning theories for education, the history of curriculum development, the process of curriculum planning, curriculum design, and the strategy of curriculum change. The model she presents for curriculum development corresponds closely to the actual procedures used in the development of the Contra Costa County Social Studies Guides and includes 4 main steps:

Step 1: Diagnosis of needs

Step 2: Formulation of objectives

Step 3: Selection of content

Step 4: Organization of content

Step 5: Selection of learning experiences

Step 6: Organization of learning experiences

Step 7: Determination of what to evaluate and of the ways and means of doing it

(Taba, 1962, P. 12)

One of Dr. Taba's major points was that a set of criteria should be established as a basis for decision-making in order to develop a curriculum rationally. She also thought it was necessary to experiment with new curriculum patterns in the classroom as new conceptual schemes were developed, and recommended the interaction of practitioners (e.g., teachers) and theorists (e.g., specialists in research or curriculum development) in the development of a curriculum. In discussing the role of a consultant, her position was that the consultant should not function as a change agent, but rather that the consultant should supply the knowledge and information the situation calls for, should start with the perceived needs of the teachers and introduce theoretical considerations when appropriate, and should foster the development of local leadership to reduce their dependency on the consultant. Throughout the sections on curriculum development and strategy for curriculum change, Dr. Taba expressed a concern in the area of human relations and stressed the need for an emotionally supportive atmosphere in order to maintain a productive work setting. She felt this was especially important in working with teachers, whom she had found to be hesitant in taking risks by innovating and who needed preparation time to acquire skills in curriculum planning.

Teacher's Handbook for the Curriculum

During the 10 years of development work in Contra Costa County, the framework was laid for the curriculum and decisions were made on the organization and content of the guides. In 1965 Dr. Taba, with assistance from James L. Hill, also a professor at San Francisco State College, published

the Teacher's Handbook for Contra Costa Social Studies, Grades 1-6 (1965). This handbook described the curriculum and how to use it, presented a rationale for the curriculum, and explained how it was developed.

The handbook outlined several problems which influenced the curriculum development: first, the knowledge explosion and the pressure to cover an increasing range of content; the obsolescence of descriptive knowledge, such as population statistics, which often become out of date soon after a student learns it; and the need to include concepts not only from history and geography, but also from the social sciences such as anthropology, economics, and sociology. As a result of these concerns, Dr. Taba stressed the need to examine what kind of knowledge is most durable and valuable and to make a new selection of content on this basis. She also stressed the need for a curriculum to teach thinking skills and to accommodate the wide range of levels of ability and sophistication which exist in today's classrooms. Dr. Taba summarized the requirements for a new curriculum this way:

> . . . the curriculum must simultaneously build a more sophisticated understanding of the world today, use a greater range of knowledge, be applicable to pupils having a greater range of abilities, and deal with expanded content.
>
> (Taba, 1965, P. 2)

A substantial portion of the handbook was devoted to how the curriculum was developed. An important procedure was the use of a set of criteria in the selection and organization of content and learning experiences which Dr. Taba had stressed in her earlier work, Curriculum Development: Theory and Practice. For example, criteria dealing with validity, significance, and balance were applied in selecting the main ideas for a unit. The handbook further explained the meaning of each of these and other criteria and how they were to be applied in making decisions in the curriculum development process.

Research Studies in Children's Thinking

As Dr. Taba listened to tape recordings of classroom discussions, she noticed that often students made comments which reflected a more sophisticated thought process than certain research on the development of children's thought processes indicated they would be capable of at that age.

She felt that additional research needed to be done on children's thinking and received two overlapping grants from the U.S. Office of Education for this purpose. The studies were not designed as an evaluation of the effectiveness of the Contra Costa County Guides, but the curriculum was used as a basis for the research and members of the Contra County staff and many Contra Costa County teachers participated in the studies. The products of the studies were two project reports, "Thinking in Elementary School Children," published in 1964, and "Teaching Strategies and Cognitive Functioning in Elementary School Children," published in 1966. These reports showed that elementary students could master abstract and symbolic thinking of a rather high order and that curriculum and teaching strategies could be designed which fostered the development of thinking skills. The results of the studies provided impetus for further development of the curriculum.

The knowledge gained through these studies contributed to later revisions of the curriculum in several ways. First, it allowed Dr. Taba and other staff to clarify their ideas on the thinking process and on the development of thinking skills and enabled them to more precisely define teaching strategies which would encourage the development of thinking skills in children. Earlier work had been done on designing teaching strategies, but the strategies had not been clearly defined and it was not clear which strategies were most effective. Through the research studies the staff was able to identify questions which elicited higher level responses and to construct instructional strategies for teachers to follow, and this information was used during the later revision process in formulating questions to include in the guides. The research studies also contributed to the development of techniques for measuring some of the cognitive objectives of the curriculum. Teachers had expressed the need for evaluation techniques, and during the research studies work was done on designing a system for analyzing discussions and judging student responses which was later used as a basis for evaluation exercises in the revised curriculum.

## Funding for Product Development

The guides developed by Contra Costa County needed revision, but the resources for a thorough revision were not available through the county. In 1965 Mary Durkin and Alice Duvall were still on the county curriculum staff and devoting part of their time to the social studies program, but they also had major responsibilities in other subject areas and had little time to work on the guides. Mary Durkin considered retiring, but was able to arrange for herself and Alice Duvall to be reassigned as full time social studies supervisors and decided to remain with the county.

Meanwhile, Dr. Taba was searching for funding for a project to revise the curriculum. During the mid-1960's the U.S. Office of Education made a large number of grants for social studies curriculum projects and so the U.S. Office of Education seemed to be the best source for funds. In 1964 Dr. Taba submitted a proposal to the U.S. Office of Education for a project which would include the production of student instructional materials to support the guides. This proposal was not funded and in 1965 she submitted a revised proposal which did not include the development of student materials, but only the revision of the Teacher's Guides. The proposal also included a section exploring patterns of dissemination and the formulation of a model for curriculum development. Dr. Taba wanted to conduct an evaluation of the curriculum but did not include an evaluation study as part of the proposal. The review panel of the U.S. Office of Education insisted on including an evaluation with a control group design. Dr. Taba felt that such a study was inappropriate because the program was still in a developmental stage and because of the limited resources available for such a study, but did agree to conduct the evaluation.

The proposal outlined three main objectives of the project and procedures for meeting these objectives. The first objective was to design, develop, and implement a social science curriculum for grades one through eight through the joint efforts of project staff, curriculum and content specialists, and teachers. The tasks were to identify core ideas and concepts, organize the content, plan learning experiences, develop teaching strategies, and select instructional materials and then to pilot test and revise each unit. A second objective was to distill from the curriculum a model which could be applied to curriculum innovations in any subject

area. This task involved identifying the generic aspects in the curriculum and then formulating them in a manner that would be useful as a methodological model for curriculum development. The third objective was to develop a format for implementation and dissemination of curriculum innovations. The project proposed to design and test several patterns of dissemination with a variety of school systems in an attempt to determine the optimal conditions for adequate implementation and dissemination and to prevent some problems that have prevented the adequate use of innovations.

The project was to be conducted at San Francisco State College which has an extensive teacher training program and a large staff in the Department of Education with expertise in curriculum work and research.

The time schedule for the project is shown in Appendix C. The project final report states that the time schedule was followed closely with the following changes:

> . Extensive work on the generic model was not begun until the third year of the project.
>
> . During '66-'67 only sample units of grades 7, 8 were tried out.
>
> . It was decided to incorporate material for teacher guidance into the units themselves (in the form of "Notes to the Teacher" and front matter) rather than prepare separate guides.
>
> . Training of unit field testers was moved up to '66-'67.
>
> . Analysis of formal and informal tests was continued during '67-'68 and '68-'69.
>
> Major additions to the plan were as follows:
>
> . Twelve kinescopes were prepared from videotapes obtained as part of the teacher training-dissemination effort.
>
> . Behavioral objectives were developed and included in each grade level guide.
>
> The only major defect in the plan proved to be the allocation of the last year to the final revising of guides. Given the extensive changes made, it is clear that his phase should have begun earlier.
>
> (Wallen et al, 1969, Pp. 8-9)

## PRODUCT DEVELOPMENT

### Management and Organization

The major effort during the first year of the project was to plan the project and recruit and organize the staff. Some of the staff members had been involved in the earlier research studies while others were recruited especially to work on this project. During the second year the main tasks were to begin to revise the guides, to design evaluation instruments, and to begin dissemination efforts. Then unexpectedly, in June 1967, Dr. Taba became ill and died. Her death came as a shock to the staff. Since she had played such a major role in the development of the curriculum, it was not clear to the staff, the School of Education at San Francisco State College, or the U.S. Office of Education if the project would continue. The staff opposed having an outside person brought in to direct the project; and so after talking with the key staff members, the Dean of the School of Education at San Francisco State College asked Dr. Norman Wallen, one of the staff members, to assume the directorship of the project. Dr. Wallen agreed to direct the project and was approved by the U.S. Office of Education. After Dr. Taba's death the staff assumed cooperative responsibility for the project and they all contributed to completing the unfinished tasks. At this time the name of the curriculum was changed to the Taba Curriculum in the Social Studies in honor of Hilda Taba.

Another major setback came during the last year of the project. Severe campus disturbances at San Francisco State College disrupted the work on the project and resulted in lost time. The project staff had to exert extra effort to make up for the lost time to finish the project by the deadline. Throughout the project the staff had to devote a substantial amount of time to handling the many administrative details required by the foundation which channeled the funds for research projects at San Francisco State College.

The products of the project were eight teacher's guides, a revised version of the handbook for teachers, and the project final report.] The project report, Final Report, The Taba Curriculum Development Project in Social Studies, describes the development of the curriculum, the dissemination efforts, the development of evaluation measures, the evaluation study, and the "generic curriculum model." This model was developed as part of

the project and includes five interactive components: objectives, content, learning activities, teaching strategies, and evaluative measures. The final report discusses each of these components and their interrelationships, and gives examples of how this model can be applied in other subject areas.

Work Atmosphere

Perhaps a key to the success of this project was the cooperative relationship among the staff members and their ability to work together. Throughout the development of the curriculum guides, major decisions were generally made by consensus of the key personnel in the project after a process of group discussion. Although there was spirited discussion on specific points, the staff shared the same general philosophy and was generally able to reach agreement on issues. Several project staff commented that they believed that the ability of this group of people to work effectively together was the most crucial variable in the success of the project.

Staff

The project staff was divided into two groups, a curriculum development group which was also primarily responsible for the dissemination efforts, and an evaluation group. For most of the project the curriculum development group consisted of one full-time and one half-time senior staff member with some assistance from support staff. The evaluation group consisted of two or three senior staff members who devoted from one-quarter to full time on the project and a number of research assistants. A core of four or five senior staff members made most of the decisions on the project. The two groups worked independently, although there were frequent meetings and other types of interactions between the two groups, and in the early stages of the project regular Monday morning meetings for the staff were conducted. Efficient secretarial help was important in the operation of the project, particularly during the last year when the guides were typed.

## Actual Procedures for Development of Product

Mary Durkin and Jack Fraenkel did almost all the curriculum development. Mary Durkin took a leave of absence from her job in Contra Costa County to work full time on the curriculum for all four years of the project. Alice Duvall, also from Contra Costa County, worked half time during the first year. In the second year Dr. Jack Fraenkel, who had six years of teaching experience and a Ph.D. in curriculum development, joined the staff and worked half time for the remainder of the project while also teaching classes at San Francisco State College. Help was provided by teachers who worked on specific units, an assistant who did some library research, and secretarial support. Mary Durkin and Jack Fraenkel divided most of the work up between themselves, with Mary Durkin concentrating her effort in the early grades and Jack Fraenkel in the middle grades.

As they revised the guides for grades one through six and wrote new guides for grades seven and eight, the curriculum writers interacted with consultants in the social sciences, teachers, and other staff members. To revise a guide the writers reviewed existing guides, listened to tape recordings of the curriculum being used in the classroom, met with classroom teachers and consultants, and prepared an outline draft of the main idea, key concepts, and factual content to be included in each unit for a specific grade level. Then they presented the outline to social science scholars who checked the outlines for content validity, power, significance, and accuracy of interpretation, and also suggested other important ideas from their field which might be added to the outline. The scholars, who were selected because they were people-oriented and interested in the curcirculum, were consulted frequently and the project staff found their input valuable. Teachers were also asked to review the outlines and would comment on the appropriateness of the content for students and suggest improvements.

The writers then prepared tentative drafts of the units and submitted them for review by other project staff. The staff critiqued them on the basis of:

a) balance and scope of content,

b) development of cognitive tasks,

c) opportunity for attitudinal development,

d) appropriateness and sequence of learning activities,

e) overall relationship of content to learning activities,

f) degree to which learning activities and factual content promote an understanding of the main idea, and

g) consistency with theories of learning

(Wallen et al, 1969, P. 31)

The writers then revised the units and in some cases resubmitted them to the consultants.

After drafts of the units were prepared, a small group of teachers tried out the materials in their classrooms, and the writer met the teachers, generally twice a month, to informally discuss the weaknesses and strengths of the units. In these discussions the teachers were asked to focus on the degree to which an activity contributed to an understanding of the main idea of the unit and on whether it helped students form their own conclusions. Most of the teachers taught in the San Francisco area. They had been selected by contacting administrators and asking them to suggest teachers who held a variety of philosophies, who taught a range of different types of students, and who would be responsible in assuming the duties involved in trying out the curriculum. The classroom teachers were trained initially by the project staff and later by project-trained teacher/leaders. The project final report included these comments on the value of tryouts:

> These teachers were invaluable aids in determining which main ideas were inapplicable in a wide variety of situations, which learning activity sequences were most effective, when other or additional content samples were appropriate, when and were additional learning activities were needed, or where certain activities were too difficult or trivial. The teachers also made substantial contributions in recommending materials to be included in the curriculum. (Teachers trying out the guides, however, seemed to be less critical than the curriculum developers had hoped until they had explored further the theory underlying the cur-

> riculum.) Further changes in the units were then made in the light of these teachers' comments and suggestions.
>
> (Wallen et al, 1969, P. 32)

If possible, the revised units were again tried out, but this was not generally the case. The seventh and eighth grade guides required the most tryout and revision since they were not part of the Contra Costa Curriculum series of guides.

As for the importance of combining curriculum developers, social scientists, and teachers in the revision of the guides, the project final report explained:

> Discussions with classroom teachers and consultants were frequent. The underlying assumption here was that each member of the triad performed a unique service. The consultant helped to insure that the content included in the units was a valid representation of what is significant in his discipline. The curriculum worker helped to insure that the organization of the units was consistent with the processes basic to the curriculum. The classroom teacher helped check the appropriateness of the materials to the needs and interests of today's youngsters in real-life classrooms
>
> (Wallen et al, 1969, P. 32)

Although the revised guides appear similar to the Contra Costa County guides, there are major changes in content, learning activities, and organization. Some content was no longer acceptable because of changes in the social climate and was replaced; some main ideas did not seem important enough to be a main idea and were made a sub-idea; and all the content was updated and validated. The sequences of learning activities were strengthened and edited and, in response to teachers' requests, more emphasis was put on feelings, values, and attitudes. Organizing ideas were added to the curriculum as an aid to structuring the content. The notion of using organizing ideas was brought up during a conversation between Mary Durkin and one of the consultants. The consultant commented that the main ideas were good, but that many students probably did not have the background and experience to justify making broad generalizations listed as "main ideas." Mary Durkin then thought of using an organizing

idea which would relate the main idea to the specific content of a unit. The organizing idea became a helpful tool in planning the curriculum.

Another major change was in the introductory materials to the guides. The introduction of the earlier guides consisted of short sections on the broad objectives of the program, the organization of the units, and the subject matter content included in the guides. The introduction to the revised guides is still brief, generally about 10 pages, but it provides the teacher with more background on the curriculum and how to use it. The introduction includes the key concepts of the entire curriculum, the behavioral objectives for the year, a summary for the year's program, a rationale for selecting content samples, a description of teaching strategies, and a definition of terms. When the staff first began the guides, they planned on placing this information in a separate manual, but decided during the development to include it in the introduction and also to incorporate other teacher training materials into the body of the guides.

A significant addition to the guides was the section in the introduction on teaching strategies to develop cognitive and affective skills which outlined a sequence of questions for teachers to use as a guide in leading classroom discussions. The earlier guides were used in conjunction with the teacher's handbook, which did include a section on leading class discussions and examples of class discussion, but which did not lay out explicit strategies. During the research studies the staff had formulated systematic sequences of questions which were effective in encouraging students to make certain types of responses and these questions were organized into a form which teachers would understand and use. These sequences of questions were included in the revised guides.

Another addition was the incorporation of evaluation exercises into the body of the guides. These exercises were not added until the final stage of development. The writer wrote and revised the units and marked places where evaluation exercises would be appropriate and the evaluation staff later wrote in the evaluation exercises. During the first two years of the project the evaluation staff focused on the development of appropriate evaluation instruments which they intended to use in the evaluation study and also to later incorporate into the guides. These measures were designed to measure:

- the quality of students' generalizations
- the flexibility and variety of students' grouping and labeling
- the variety of content which students use in response to open-ended questions.

In the final stages of the project the evaluation staff coordinated their efforts with the curriculum staff in order to integrate these evaluation techniques into the program. Although these evaluation exercises were an important addition to the guides, there was not time to extensively tryout the exercises as part of the guides and there are not evaluation exercises for many of the objectives of the curriculum.

The behavioral objectives were another addition to the guides, but were not finalized until the final stage of the project. During the first year of the project a member of the evaluation staff analyzed the existing units and prepared a preliminary outline of objectives, but no agreement was reached at that time on a definite list of objectives. However, the early versions of the objectives provided a framework for both the curriculum and evaluation groups in their tasks. During the last six months of the project a statement of objectives was developed, but only after several drafts had been prepared and discussed by the staff. The use of a rationale and specific examples of behaviors for each objective solved some differences between staff members who held different viewpoints on how objectives should be stated. The final report had this to say about the procedure used in formulating objectives:

> Although a logical case can be made, and usually is, for the statement of objectives as the first step in such an endeavor, this was not, in fact, the way the project staff functioned. At this point, we would argue that there is much to be gained by avoiding too early closure on such matters.
>
> (Wallen et al, 1969, P. 33)

The revised guides were better organized and written than the earlier version of the guides and they were extended to include the seventh and eighth grade. They included more information on the background of the curriculum, the teaching strategies were more clearly defined, evaluation exercises had been incorporated, and behavioral objectives were added.

But the guides still did not have the accompanying instructional materials needed to implement the curriculum.

## SUMMATIVE EVALUATION

### Evaluation Staff

The evaluation group had four senior staff members: Enoch D. Sawin, who worked on the project quarter- or half-time all four years while also teaching at San Francisco State College; William Crawford, also at San Francisco State College, who was involved during the early stages of the project; Norman E. Wallen, who came to San Francisco State College during the second year of the project to work on the evaluation half-time and to teach half-time and who took over as project director after Dr. Taba's death; and Anthony J. McNaughton, who was interested in Dr. Taba's research and took a leave of absence from the University of New Zealand during the second year of the project to work on test development and who later was involved through correspondence and short visits. While the members of the curriculum development group had experience teaching in public schools, the evaluation group staff had backgrounds in college teaching and research.

The four main members of the evaluation group were helped by graduate student research assistants who worked on the development of evaluation techniques, collection of data, and data processing and analysis. The number of assistants varied. During the last two years of the project four or five assistants generally were working half-time. Several of the assistants worked on the project for two or more years.

### Summary of Evaluation Efforts

The evaluation group spent most of the first year in planning the evaluation study, the second year in developing measuring instruments, the third in actually conducting the study, and the fourth in analyzing the results. Their first task was to design the evaluation study. Dr. Taba thought evaluation was an important aspect of the curriculum development process, but she did not favor the comparison type of evaluation which the U.S. Office of Education requested and would have preferred a differ-

ent type of evaluation or a more elaborate comparison study conducted over a long period of time. The staff considered other types of evaluation plans, such as making intensive case studies of individual children to determine how they were influenced by the curriculum, but finally did settle on a design for an evaluation study which they thought was feasible and could also have meaningful results.

A problem in designing the study was in obtaining an adequate control and experimental group. The staff decided to compare the performance of sixth grade students taught by teachers who had considerable training and experience with the curriculum with the performance of students taught by teachers who were not familiar with the curriculum. The evaluation group developed measuring instruments to use in the study which they hoped would measure the goals of the curriculum but would also be appropriate for the comparison group. The evaluation staff worked independently of the curriculum development group so the tests would not be biased, but they did cooperate with the curriculum group during the later stages of the project to incorporate evaluation exercises into the teacher's guides. The fact that there was no clearly stated set of objectives for the curriculum created a handicap in developing evaluation instruments.

It should be noted that the experimental group in the evaluation study was not using the revised version of the guides, since the guides were still under development. There were many changes in the new guides and so the evaluation was not conducted on the revised version of the curriculum. The testing was done during the third year of the project. At first the plan was to conduct the evaluation study during the last year when perhaps the revised version of the curriculum could be used, but that would not have left sufficient time for analysis of results or have provided any information that could be used in revising the curriculum. At one point the staff thought that an evaluation might be done during both the third and fourth years, but it was only possible during the third year.

The results of the evaluation study were inconclusive. The evidence suggests that the experimental curriculum students performed better in interpreting data, use of appropriately abstract concepts, and emphasis

on human-related topics. Several measures showed no significant differences and some seemed to slightly favor the control students.

Development of Tests for the Evaluation Study

The evaluation staff wanted to use instruments which would measure the goals of the Taba Social Studies Curriculum, but which would also be appropriate for the comparison group. They decided to measure general thinking skills, such as the ability to interpret data, to explain, to generalize, and to apply generalizations. The staff felt that adequate measures were not available to measure these skills and began to develop their own instruments using a combination of fixed response and free response formats. Each of the five evaluation staff members took major responsibility for one test or group of tests which they worked on independently, meeting often to critique each other's work and to discuss their progress. To prevent bias in the testing instruments the evaluation group worked independently of the curriculum group and selected content for the tests which would be appropriate both for the new curriculum and for traditional social studies programs. A problem in designing the measurement instruments was that a clearly stated set of objectives for the curriculum had not been agreed on. Also, the curriculum itself was still being developed, making it difficult for the evaluation staff to get a good understanding of what the curriculum contained.

Each of the tests underwent an extensive tryout and revision process as the evaluation staff strove to develop valid measures for the objectives of the curriculum. They limited the number of items of the tests, which imposed a constraint on reliability, but were able to get reliability indexes of approximately 65.75. Three fixed responses were developed: (1) Application of Generalizations Test, (2) Test of Ability to Explain, and (3) Interpretation of Data Test. Five free response measures were developed, two of which were later incorporated into the guides. The project final report includes copies of the tests and a detailed description of the development procedures. This report will briefly describe the tests and how they were developed.

The Application of Generalizations Test

The Application of Generalizations Test (AGT) is intended to measure the student's ability to apply some of the generalizations dealt with in the curriculum. The format is based on tests developed during the research studies and consisted of a series of short statements describing a society, interaction among individuals, or other aspects of human interaction, each followed by a series of statements to which the student responds "probably true" or "probably false." Following is the sample question in the introduction to the test:

> Mr. Jones was a farmer in the midwest. When he heard about the discovery of gold in California he left his family and went to California.
>
> 1. Mr. Jones went to California with his family.
> 2. Mr. Jones was a very rich farmer.
> 3. Mr. Jones went to California to look for gold.

The test was developed in four stages. An initial form, consisting of a set of statements and items; a first revision developed after a small tryout and review by staff members and consultants; a second revision based on statistical indexes derived from a tryout with over 100 students; and a third revision, the final form, based primarily on information gained in interviews with students.

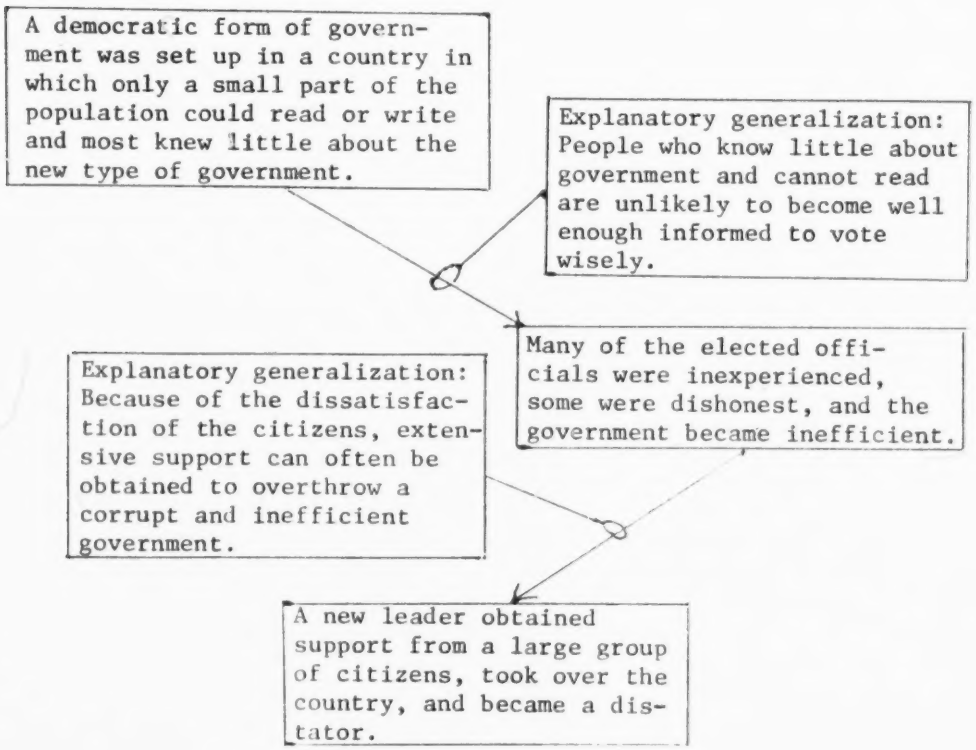
The following criteria were applied in developing the test:

- The format must be effective, at least with sixth graders.
- The generalizations called for in correctly responding to the items should be those included within the Taba curriculum.
- The test as utilized with pupils must function as intended; i.e., a keyed correct response should result from the correct applications of one of the generalizations in the curriculum. This was tested through student interviews, a technique which provided valuable insights for the test developers.
- Items should meet acceptable standards of difficulty and total score correlation.

The Test of Ability to Explain

The Test of Ability to Explain (ABEX) is designed to measure, as directly as possible, the abilities involved in explaining behaviors, and more specifically, to deal with cause-effect relationships. The test takes 50 minutes and students answer questions on the basis of certain facts they are given. At first, the test was to include separate sections for high, middle, and low ability students to provide high discriminating power at the upper levels, but the item format developed for high ability students seemed appropriate for all levels of ability and the other sections were not written. In developing the test the writer would construct a flowchart of cause and effect relationships to aid in formulating items. Nine major revisions were made, based on tryouts and discussions with students, comments of other staff members, and item analyses, before the final version was complete. Much effort was devoted to testing the reliability and validity of the test and comparing it with essay tests. A sample of a flow chart and the derived item follows:

FLOW CHART:


A democratic form of government was set up in a country in which only a small part of the population could read or write and most knew little about the new type of government.
Explanatory generalization: People who know little about government and cannot read are unlikely to become well enough informed to vote wisely.
Many of the elected officials were inexperienced, some were dishonest, and the government became inefficient.
Explanatory generalization: Because of the dissatisfaction of the citizens, extensive support can often be obtained to overthrow a corrupt and inefficient government.
A new leader obtained support from a large group of citizens, took over the country, and became a dictator.

A BLOCK OF ITEMS:

*Directions: Read Fact W and Fact X in the boxes below, then answer the question under the boxes.*

| | Fact W | Fact X |
|---|---|---|
| NEW facts: | A form of government in which important officials were elected by the people was set up in a country where few citizens could read or write. Most of them knew little about the new type of government. | The government of a democratic country began to operate very poorly. Many of the officials lacked skills needed for the offices they held. |

25. Both of the above facts took place in the same country and at about the same time. Could one have at least partly caused the other?

A. Yes; Fact W could have at least partly caused Fact X.
B. Yes; Fact X could have at least partly caused Fact W.
C. No; neither is likely to have caused the other.

(Wallen et al, 1969, P. 136)

The Interpretation of Data Test

The third fixed response test, the Interpretation of Data Test (IDT) is intended to measure the student's ability to make logical deductions from information provided, particularly when presented in a form other than strictly verbal. The format consists of an archeological site map of a Bushman settlement and a key identifying the symbols found on the map. Students are asked to:

a. Read the map. For example:

The metal cylinders were found closest to

1. - trees
2. - post remains
3. - fireplaces
4. - the tamped area

b. Make inferences about the use of objects.

Object number 5 was most likely in this example:

1. - a horn
2. - a telescope
3. - used to carry arrows
4. - a musical instrument
5. - used to carry goods to market

This test was not tried out and revised as extensively as the AGT and ABEX, but it was tried with students as part of the development procedure.

Free Response Tests

In addition to the fixed response measures, five free response exercises were developed. The construction of the free response tests had two purposes: to be used in the evaluation study to measure changes in the level and style of children's thinking and also to provide the teachers with a systematic method for analyzing student responses. Exercises were developed which would lend themselves to teacher use in the classroom and simplified versions of the exercises on grouping and labeling and generalizing are included in the teacher's guides.

In the grouping and labeling exercise a story is read aloud to the students. Then the students are given a list of 25-30 words from the story and are asked to group and regroup the words into categories and develop labels for the categories. A system for scoring is applied which rates variables such as number of items grouped, number of items per group, frequency of certain types of groups, abstractness of labels, and flexibility.

In the generalizing exercise students are read a story and asked to write a sentence on what the story is about. The sentences are scored on the accuracy and completeness of content and also on a number of process variables such as abstractness and subordination.

These two exercises have detailed scoring procedures with point allocations to specific words and phrases. During tryouts it was found that these procedures were too complicated and time consuming for teachers to use and some simplified scoring procedures were developed. As yet there is no evidence that teachers actually use these exercises in their classrooms, even with the simplified scoring procedures. The validity and reliability of these exercises were not investigated as thoroughly as for the fixed response tests. Emphasis was put on determining the intercorrelations among pairs of scores and the correlations were high.

The last three free response measures were developed specifically for the evaluation study and were not intended for use by teachers. The purpose of these exercises is to measure social studies understanding

which is given a high priority in the literature. In one exercise students are asked to list important things about Latin America and their responses are scored on the basis of the use of facts and generalizations, abstractness, comparing and contrasting, and people-orientation. In the second of these exercises, the Island Question, students are given these directions:

> Suppose you were to study together the people of a large island in the Pacific. What questions would you want to ask about these people to be sure we understood the important things about them?

This exercise was designed to assess the student's ability to ask questions, and a scoring system was developed through studies of intercorrelations of scores which assigned points for substantive ideas and qualifiers which appeared in each question. In the final exercise students were read a short story and asked to list titles for the story. A system was developed for scoring the titles on the basis of inclusiveness, originality, and abstractness.

## Field Test

The Final Report, The TABA Curriculum Development Project in Social Studies includes a detailed description of the design of the evaluation study, how it was conducted, the analysis of the data, and an interpretation of the results. This paper contains only a brief explanation of the evaluation study. The evaluation was conducted during the school year 1967-68 and compared the performance of sixth grade students taught by 10 teachers using the Taba curriculum with the performance of students taught by teachers who did not use the Taba curriculum. Student performance was measured using the tests developed by the project staff and the sequential Test of Educational Progress in Social Studies (STEP) which is designed to measure the ability to understand, interpret, and analyze social studies materials.

Ten teachers who had considerable experience and training in using the Taba curriculum were selected to serve as teachers for the experimental group. All of the teachers had a minimum of two years experience working with the curriculum and had participated in training sessions.

Eight teachers were from the San Francisco Bay Area and two teachers were from another state. These 10 teachers were given three one-day in-service training sessions with project staff and subject matter experts during the months of October through December. These sessions focused on content background and teaching strategy to be used in developing thinking skills in children. To prevent bias, the project staff members involved in these sessions had not seen the tests developed by the evaluation staff. Each teacher kept a log of the approximate amount of time spent on the curriculum. Five of the teachers recorded spending an average of three hours per week teaching the curriculum; three teachers recorded spending more time and two teachers spent less time. All but one of the teachers were observed at least once during the year while teaching the Taba curriculum, serving as a further verification that the curriculum was actually being taught. Thus, the experimental group consisted of sixth grade students taught by teachers who had considerable experience in using the Taba curriculum.

The teachers for the comparison group taught in seven schools in one suburban school district. An attempt was made to select teachers who were similar to the teachers of the experimental classes. This was done by asking supervisory personnel in the district to identify sixth grade teachers who were "interested in new developments, had considerable professional identity, and were sufficiently flexible to be able to ac accommodate new teaching styles." Thus, both groups consisted of exceptional teachers interested in innovation. An attempt was also made to maintain a similar socio-economic background between the curriculum and comparison students. This was done on the basis of judgments of school personnel on the typical socio-economic status of students at each school.

Neither the teachers nor the students were selected on a random basis which placed definite limitations on the significance of any statistical evaluation results of the study. The evaluation staff recognized this limitation, but felt this was the most practical method for selecting curriculum and comparison groups and that the results of the evaluation study would provide a sufficient basis for judging the effects of the curriculum. They did assume that selection of students for curriculum and comparison classes approximated a random assignment and found

on the pretests that the two groups were closely matched in terms of the mean scores and standard deviations on these measures.

Administration of Tests

Early in the school year the tests developed by the evaluation group and the STEP Social Studies Test, Level 4, Part 1, were administered to curriculum and control students over a five-day period. The tests were repeated near the end of the school year, only the stories were changed for some exercises in the free response tests and level 3 of the STEP test was used in the spring because level 4 was lacking in ceiling. All of these tests were administered by specially trained personnel who had experience in testing. An incorrect form of three of the free response tests was administered to four of the comparison classes and so an analysis was only done on the scores of six curriculum and six comparison classes for these tests. The analysis of the results of the ABEX test was limited to nine of the curriculum classes since one class did not have sufficient time to complete the test.

Nine tests were administered and 26 variables analyzed. Following is a list of the tests and the variables:

*Grouping and Labeling Exercise

1. Score 1 - number of items
2. Score 2 - abstractness - first attempt
3. Score 3 - abstractness - total first and second attempts
4. Score 4 - flexibility

Latin America Listing Exercise

5. Score 1 - total score
6. Score 2 - facts - generalizations
7. Score 3 - abstractness
8. Score 4 - comparing, contrasting
9. Score 5 - "human" score

Island Questions Exercise

10. Score 1 - total score
11. Score 2 - number of abstract substantive ideas
12. Score 3 - number of concrete or vague abstract conceptual terms

*Titles Exercise

13. Score 1 - inclusiveness
14. Score 2 - originality
15. Score 3 - abstractness

*Generalizing Exercise

16. Score 1 - total score
17. Score 2 - simplified score
18. Score 3 - number of concrete concepts
19. Score 4 - number of abstract concepts
20. Interpretation of Data Test (IDT)

Test of Ability to Explain (ABEX)

21. Score 1 - total score
22. Score 2 - recognizing events
23. Score 3 - recognizing principles
24. Score 4 - applying principles

25. Application of Generalizations Test (AGT)

26. Sequential Test of Educational Progress in Social Studies (STEP)

## Results

Descriptive statistics were completed for each variable and an analysis of covariance conducted using the pretest as the covariate. Of the nine tests, four showed no significant differences in gains between the curriculum and comparison groups. These tests were Titles Exercise, Test of Ability to Explain, Application of Generalizations Test, and the STEP Test. The curriculum group scored significantly higher on three measures: the Interpretation of Data Test; the Generalizing Exercise, Simplified Score; and the Latin America Listing Exercise, "human" score. The Final Report makes this comment on these findings:

> These findings suggest that the curriculum pupils showed greater gain in their ability to interpret data and make legitimate inferences therefrom as measured by the IDT Test; showed greater gain in their level of conceptual development as applied to summarizing the story, and indicated a greater concern for human, or people-oriented, items when listing information about Latin America.
>
> (Wallen et al, 1969, P. 209)

Three other scores indicated significant differences favoring the com-comparison group. One of these was the Latin American Listing Exercise sub-score comparing contrasting. Analysis of this sub-score indicated

*Reduced number of cases

that the predominant responses given by the comparison group dealt with factors of physical geography which were not emphasized in the Taba curriculum. The comparison group also showed higher gains on the Island Questions Exercise. It was noted that on this exercise the comparison group scored lower than the curriculum group on the pretest and the two groups had similar posttest distributions. Finally, the comparison group showed greater gains on the Grouping and Labeling Exercise, sub-score number of items. This was an unexpected result as the curriculum group showed more gains on the other three sub-scores of this exercise although at non-significant levels.

Interpretation of Results

The Final Report, The TABA Curriculum Development Project in Social Studies includes these comments on the results of the evaluation study:

> It is, of course, disappointing not to find more clear-cut evidence in support of the impact of the curriculum on students. Anyone familiar with the history of such evaluation, however, will not be surprised. It is, perhaps, too much to expect that one year's experience in an innovative curriculum will produce dramatic results, particularly after students have completed five years of prior schooling. This factor is especially important for the Taba curriculum wherein much emphasis is placed on recurring experiences related to key concepts throughout the elementary grades. Thus a truly meaningful evaluation should involve a longer time period than one year. It was for this reason that Hilda Taba was not enthusiastic about such short term evaluations as were required for this project. Further, note should be taken of the nature of the measures used and the small likelihood that large changes on such variables as "Ability to Explain" and "Application of Generalizations" would occur as a result of one year's experience in one subject. Students participating in social studies during only a relatively small part of their time in school; most of their time is spent in other subjects, often taught along traditional lines.
>
> Considering these factors, it is perhaps somewhat surprising that the results are as favorable as they are. Evidence (though not conclusive) that "curriculum" pupils made better inferences from data (IDT), used more appropriately abstract concepts in summarizing (Generalizing Exercise), and are more

"people" oriented (Latin America Listing Exercise) may be considered rather impressive. Of the negative findings, the suggestion that "control" pupils made more spontaneous comparisons of geographical facts (Latin American Listing Exercise) is not particularly damaging since these comparisons (e.g., "Brazil is larger than Bolivia.") were at a low level of cognitive functioning. The finding that "control" pupils showed greater gain in the number of items put in groups (Grouping and Labeling Exercise) may indicate less sophisticated bases of grouping since measures of abstractness of groups favored the curriculum (though not significantly). The evidence that "control" pupils asked better or at least more conceptually abstract questions (Island Question Exercise) suggests a limitation of the curriculum. It is possible that the pupils taught this earlier version of the curriculum received too little opportunity to raise questions and judge their worth. In this respect, particularly, it is unfortunate that the latest version of the curriculum was not evaluated since there is a much higher incidence of such experiences in the revised guides, particularly in the Application of Generalizations task.

Subsequent to obtaining these results, the sixth grade guide was analyzed in terms of the number of learning activities specifically directed toward the skills intended to be measured by the evaluation tests. Only one of the 183 learning activities deals specifically with concept formation (grouping and labeling) and few with applying generalizations. In contrast, a great many deal with organizing, interpreting and summarizing data and making inferences therefrom. The revised sixth grade provides substantially more opportunities for concept development and applying generalizations.

(Wallen et al, 1969, Pp. 225-226)

Pupil Questionnaire

As part of the evaluation study a pupil questionnaire was administered to both the curriculum and comparison classes at the end of the school year. The questionnaire consisted of a list of 25 activities, most of which were related to objectives of the curriculum. Students indicated their liking for these activities by responding that they liked the activity "not at all," "not much," "some," or "very much." The administration of the questionnaires may have influenced the results, as

they were given by the classroom teacher to the curriculum classes but were part of the test battery given by a test administrator for the comparison classes.

The Final Report gave this summary of the results from the questionnaire:

> "Curriculum" pupils indicated significantly greater liking for the following curriculum-related items: "Being asked by teacher and classmates to explain why I think or feel as I do," "Working on problems which have no simple, clear answer," "Having to figure out why things happened," "Disagreeing with the teacher or other pupils," "Having the teacher ask me questions," and "Organizing a lot of information in a way that makes sense." They also indicated greater liking for "Memorizing facts found in books and other places" and "Working alone by myself on individual projects," two items not considered directly related to the curriculum. The remaining 17 items showed non-significant differences.

## The Research Studies as an Evaluation

A type of evaluation was done on the approach used in the Taba curriculum in the second research study, Teaching Strategies and Cognitive Functioning in Elementary School Children. Extensive analysis of classroom discussions were conducted to identify teacher behaviors which elicited high level thought responses from students. The results of the study showed that social studies discussions conducted by teachers trained in the Taba curriculum differed in significant aspects from discussions conducted by untrained teachers. Specifically, the students of the training teachers tended to operate on higher levels of thought, as evidenced through a greater number of thought units, thought units of greater length and complexity, more sophisticated content, more abstract and complex inferences, logically related sequences of thought, and other behaviors. A complete description of this study and its results are in the project final report, Teaching Strategies and Cognitive Functioning in Elementary School Children.

## DIFFUSION

### Agency Participation and Diffusion Strategy

Dr. Taba wanted the curriculum to be used and not stuck on a shelf as happens to many innovations. She believed that plans for dissemination should be included in the development of any innovation and from the early stages of the development of the curriculum she incorporated mechanisms for dissemination. She felt that the dissemination efforts should generate a dynamic of continued diffusion through the training of local leadership. This was the pattern in Contra Costa County where county staff and teachers involved in the development process later became leaders in training others to use the new curriculum. Dissemination efforts were a major part of the project at San Francisco State College and several different training patterns were experimented with as part of this project. Many trained individuals later taught others to use the curriculum or the teaching strategies outlined in the curriculum. But Dr. Taba recognized that the curriculum would have to be commercially published and distributed in order to gain acceptance in the schools and that student materials were needed to make the widespread adoption of the curriculum practical. The teacher's guides were being published by a local printer, Rapid Printers, but Dr. Taba thought it important to distribute the materials through a large publishing house. In 1965 Dr. Taba negotiated an agreement with Addison-Wesley Publishing Company for the development of a new curriculum based on the rationale of the existing program. The Addison-Wesley version would include student materials which had been the major problem in implementing the existing version of the curriculum. The Addison-Wesley materials have been under development for several years and should become available in late 1971 and 1972.

### Diffusion Efforts

As more teachers began to use the guides it became clear that they needed training to effectively implement the curriculum. They needed an understanding of the rationale behind the program so they could adapt it to meet the needs of their pupils while still maintaining the intent of

the curriculum. They also needed practice in using the teaching strategies, particularly since the strategies require skills which are unfamiliar to many teachers, such as the use of open-ended questions and discussion rather than lectures. Often the teachers needed additional background in the content of the curriculum before they could teach it comfortably. So it was decided to try out various types of dissemination programs as part of the 1965-1969 project and to evaluate their effectiveness.

Patterns for dissemination used in the project were:

1. "Each-one-teach-one." About 70 teachers from 12 school districts were trained using the "each-one-teach-one" pattern. These teachers received training for one year and then were responsible for training other teachers the next year with occasional help from project personnel. The difficulty in evaluating this approach is that as the teachers became more independent of the project staff the less information the project staff had on their activities, but it was apparent from available records that most of these teachers were leaders in later training activities, both within and outside of their district. Their activities included presenting demonstrations, conducting workshops, and participating in in-service training. Consistent administrative support was important to the success of this approach and changes in key personnel was a cource of problems.

2. Distributed Training. Distributed training consisted of 10 days of training distributed over a year or a year and a half. Sixty-nine teachers from four school districts were trained using this pattern. The focus was on receiving feedback from the teachers on modifications needed in the curriculum rather than on developing leaders, although many of the teachers did assume leadership roles. Of particular interest are the reports of the teachers who used the curriculum. Sixty-three of the 69 teachers reported that the curriculum was "much better" or "better in some respects" than other social studies programs they had taught, and only one teacher felt that the Taba curriculum was "not quite as good." Forty-seven of the teachers reported positive changes in at least 50 percent of the students in their class in ability to meet the goals of

the curriculum (Wallen et al, 1969, Pp. 59-60). The major problems teachers encountered were shortage of materials and lack of skill in asking questions. Many of the teachers were also concerned with how to evaluate student progress. The teachers' reactions to the guides were taken into consideration as the curriculum was revised. Some of their suggestions were:

- Greater emphasis on human relations
- Development of strategies in the affective domain
- Highlight a variety of ethnic groups
- More comments to the teacher indicating the more subtle purpose of some activities
- Examples of levels of response to help teachers keep their goals realistic
- Inclusion of evaluative techniques and statement of rationale

(Wallen et al, 1969, P. 62)

3. NDEA Summer Institute. Staff members participated in an NDEA Summer Institute held at San Francisco State College in 1968. The institute focused on adapting the curriculum for use in inner-city situations and teacher training. Some of the adaptations made in the guides were later incorporated into the curriculum.

4. Summer Leadership Workshops. Three one-week workshops were conducted: one in 1966 with 65 participants, one in 1967 with 56 participants, and one in 1968 with 38 workshop participants. The workshops in 1966 and 1967 were conducted by project staff, while the 1968 workshop was staffed by leaders trained in the "each-one-teach-one" program and earlier summer workshops. The response of participants to the workshops was positive and follow-up of the members of the 1966 and 1967 workshops showed that many of them had later been involved in training other teachers.

5. Joint Council of Economic Education. Funds from the Joint Council of Economic Education made possible a year of in-service training for 20 seventh and eighth grade teachers. The next year seven members of this group in turn trained 50 other teachers to use the curriculum.

6. Orientation of Administrators. Sessions were conducted for administrators in the school systems where teachers were being trained. These sessions focused on conditions which are important in installing this type of program.

Content of Training Sessions

Although the training provided in these sessions varied, the sessions were generally 10 days in length. The training dealt with the structure of the Taba curriculum, the theory behind the structure, the teaching strategies, coding and evaluation of student responses, and the examination of recent curriculum materials. The staff developed inductive methods of instruction which proved effective with most teachers. In this approach the teachers are put in the position of a student and go through an exercise, such as an exercise on concept formation. Then the participants discuss what happened in the lesson, why the instructor acted as he did, and the reactions of the teachers during the lesson. Analysis of classroom discussions was an important part of the training sessions and the teachers thought it was one of the most beneficial activities.

The materials developed for the teacher training sessions included:

- Videotapes of classroom discussions
- Audiotapes of classroom discussions
- Typescripts of classroom discussions
- Transparencies
- Slides
- Worksheets
- Staff presentation outlines
- Pamphlet of readings

Participants in these programs were carefully chosen. Teachers were selected who were interested in trying out a new approach, who expected to continue teaching in the district, who were accepted by fellow teachers, and who were not involved in other innovative programs. Priority was given to teachers who were from districts where the administration was supportive of the project.

Various patterns of dissemination were tried as part of the project and many teachers were trained to use the Taba curriculum. However, no conclusions were drawn on the relative effectiveness of these different patterns.

## ADOPTION

The Taba curriculum has been disseminated in many different ways through different channels, and it would be very difficult to determine how many teachers are using the curriculum in their classrooms. Certainly the curriculum has been widely disseminated. Rapid Printers in Hayward, California, has been distributing the guides since 1965 and has received orders from across the country and from overseas, particularly Canada. From 1965 to 1971 Rapid Printers sold almost 34,000 guides, with an average of approximately 5,500 guides for grades one through six. Addison-Wesley, which began publishing the revised guides in 1969, has sold roughly 3,000 guides per grade each year to school districts across the country. The guides are paperbound and inexpensive to purchase.

Training to use the curriculum guides has been available through various channels, such as consultant services, extension courses, and workshops. In addition, several projects have been conducted to disseminate the curriculum or the teaching strategies in the curriculum. The Northwest Regional Educational Laboratory conducted a project on Higher Level Thinking which developed a training program for teachers built on the three cognitive skills defined by Dr. Taba. The program does not teach teachers how to use the Taba curriculum specifically, but does provide them with the skills needed to use the curriculum. Some members of the Taba project staff worked with the Northwest Lab in the development of the program. Roughly 1,000 teachers have been trained using this method.

The Speedier Project in Palamyria, Pennsylvania, works with school districts to implement innovations and trained 140 teachers to use the Taba curriculum over the years 1968 to 1971. As a result of this project three school districts in the area conducted training in the teaching strategies for all the elementary school teachers in the district and two other districts are planning to in the future. In 1968-69 a compara-

tive evaluation was done on four social studies programs in which records were kept of changes in teachers and students, and significant differences were found which favored the Taba program.

The Institute for Staff Development, located in Miami, Florida, also provides a program for training teachers to use the teaching strategies. The program is designed to teach any subject using these strategies and does not promote any particular set of materials, although participants are made aware of the Taba curriculum. The director of the Institute worked with Dr. Taba in developing a training program, and the Institute operates by training leaders from school districts who in turn train teachers in their district. So far, approximately 200 leaders and 10,000 teachers have been trained through the Institute.

## COSTS

The cost of the project was nearly $1 million over the four-year period. The U.S. Office of Education contributed slightly under $200,000 per year of $750,000 over the four-year period. This amount was divided almost equally between the development, evaluation and dissemination efforts. The largest expense was personnel and almost two-thirds of the funds was spent for the salaries and other expenses of the staff. About $50,000 to $60,000 was received each year from other sources, primarily from Contra Costa County and the Berkeley School District in the form of indirect support for services such as release time for teachers. Some small amounts of money were also received from other sources, including the Joint Council for Economic Education.

## FUTURE OF THE PRODUCT

Dr. Taba believed it was vital that the private sector take over the dissemination of the curriculum and by the early 1960's began to investigate alternative possibilities. At this time Addison-Wesley Publishing Company was searching for an elementary social studies program. Addison-Wesley began as a publisher of college books, particularly in the fields of science and math. In the early 1960's they started a school division and produced a very successful math program and then began to develop

programs in the core subject areas of English, science, and social studies. Around 1965 a representative of Addison-Wesley contacted Dr. Taba and negotiated a plan for the development of a new Taba curriculum to be published by Addison-Wesley. The Addison-Wesley version would include student materials which would allow for improvements in the guides themselves and which would simplify implementation of the program. Addison-Wesley decided to distribute the 1969 version of the guides while the new materials were being developed and added some sections to the 1969 guides which they copyrighted.

Work on the curriculum began in mid-1966, but was disrupted by Dr. Taba's death in 1967. Addison-Wesley was involved in the development of several other new programs at the time and the development of a social studies program was a new undertaking for the company. Work on the curriculum continued, building on the existing guides. Mary Durkin, Anthony McNaughton, and several others who had been involved in developing earlier guides were contracted by Addison-Wesley to work on the revised edition. First teacher manuals were planned and then authors were hired to write the student materials to accompany the manuals. The authors included teachers, professional writers, and college professors with expertise in certain subject areas. The drafts were reviewed by Mary Durkin and members of Addison-Wesley's editorial staff. As much as possible, the writers followed the guidelines of the original curriculum and were careful in the student materials not to draw conclusions or generalizations for the students or to state how people feel about things. The materials did not receive formal tryouts, although several of the authors did use materials in their own classes.

There will be changes in the new curriculum. The student materials will be in the form of hardback books and the teacher's guide will be in the form of a spiral bound teacher's edition which will include the student materials and notes to the teacher. Supplementary multi-media materials will be developed later to accompany the basic student and teacher books. The format of the teacher's materials has been simplified, but will remain similar to earlier guides. The major difference is that there will be specific references to the student materials. There has

also been changes in the content of the guides which have become possible since student materials could be written specifically for the program. The new program will include evaluation exercises and as much, if not more, emphasis on the affective domain. Addison-Wesley feels that the changes in the guides have not changed the nature of the curriculum or compromised its philosophy, and that teachers who have used the earlier guides should have no trouble adjusting to the new program.

The student and teacher books for grades 1-4 will be available in November, 1971; materials for grades 5-7 should be available the following year. A kindergarten program may be added; no decision has been made on the development of an eighth grade unit. Supplementary multi-media materials are also being planned for the curriculum. No plans have been made for a formal teacher training program, but, as in the earlier guides, the teacher's edition will include teacher training materials. Addison-Wesley plans to conduct a follow-up on users as a basis for later revisions.

It is not possible to give an accurate estimate of the cost to Addison-Wesley to develop this program, but certainly it was a major investment, and a high volume of sales will be needed in order to break even. Coming out in the early 1970's, the Taba Program in Social Studies must face competition from other recently published social studies programs which also stress an inquiry approach.

The Taba curriculum, which has been under development since 1954, is still evolving. During the early years the basic structure for the curriculum was laid through the joint efforts of Dr. Taba and Mary Durkin and other staff in Contra Costa County who could translate Dr. Taba's ideas into classroom practice. Through the university projects the theory behind the curriculum was developed and the curriculum itself was polished and refined. Now Addison-Wesley, representing private enterprise, is revising the curriculum in order to distribute it on a wider basis.

## CRITICAL DECISIONS

Many decisions contributed to the final form of the Taba Social Studies Curriculum: small day-to-day decisions such as specific content selection

explicit decisions where alternatives were considered and a deliberate choice made, such as the selection of a commercial distributor; and implicit decisions made on the basis of certain assumptions or limitations, such as the amount of resources available for development. Personnel decisions of key staff members, although not directly related to the product, were also crucial in the product history. The following events are a good approximation of the critical decisions made in the development and dissemination of the Taba curriculum.

Decision 1: Basic product characteristics dictated by the perceived needs of the Contra Costa County Schools

The subject matter and target population of the curriculum were determined by the needs of Contra Costa County schools. The county needed an improved elementary social studies program which would be appropriate for students of all ability levels in heterogeneously grouped classes. These basic constraints were given which operated throughout the development of the curriculum and which reflect the realities of the schools.

Decision 2: Development of a process-oriented curriculum

The county staff faced the choice of continuing with a content-oriented social studies program or replacing it with a process-oriented curriculum and decided on a process approach. They then had the alternative of purchasing an existing program or developing their own curriculum. None of the existing process approach programs were outstanding and they decided to attempt to develop their own curriculum. Developing their own curriculum became feasible when Dr. Taba agreed to serve as a consultant which provided them with the direction and leadership they needed. If they had not located such a consultant they probably would have purchased a curriculum.

Decision 3: Development of teacher materials rather than student materials

A duty of the Contra Costa County staff was to prepare teacher curriculum guides which outlined content to be covered each year and included suggested activities. When the staff decided to improve the social studies program, it seemed natural to do so by preparing new

curriculum guides for teachers to follow. Another reason for developing only teacher's materials was that there were insufficient funds to undertake preparation of student materials, so the county staff was limited to building the guides on available student materials.

Decision 4: School personnel play a major role in development

Teachers and staff with teaching experience played a major role in the product development. This was because the curriculum was initially a county effort and school personnel were available. Also, Dr. Taba believed that the new curriculum should be extensively tested in the classroom and that involving teachers in development was one method of dissemination. This pattern of staff utilization was important because it created a pool of committed personnel who continued to develop and disseminate the curriculum. Staff involved in the early stages of development later worked on other versions and have actively trained others to use the curriculum. Involving experienced teachers was also important in developing a process approach curriculum which other teachers could feel comfortable with and be willing to teach.

Decision 5: Conceptual framework for the curriculum

Dr. Taba provided the conceptual framework for the curriculum and developed the rationale and theory to support its approach. Many educators have promoted a process approach to learning, but Dr. Taba was able to construct an organizing structure for combining process with social studies content. This structure served as the basis for decision making in the development of the curriculum. The rationale was also useful in communicating the intent and operation of the curriculum to others.

Decision 6: Contribution of the research studies

Dr. Taba sought funds for the research studies because she believed that systematic research was needed on children's thinking and the impact of various teaching strategies in order to improve the curriculum. Although the research studies did not directly measure the effects of the curriculum, they provided information which was later used to improve the curriculum. In a sense, the research studies were a type of formative

evaluation in that they tested the effects of the teaching strategies used in the curriculum and provided feedback which was used to improve the strategies.

Decision 7: Revision of the guides

The Contra Costa County Guides were not polished enough to use on a widespread basis in the schools. The Contra Costa County staff did not have the resources for major revision and Dr. Taba sought funds for further development. At first she requested funds for a project which would have included the development of student materials. When this was not funded by the Office of Education she submitted another proposal for the revision of the guides and dissemination and other activities. This proposal was funded and the decision to just revise the guides and not develop student materials as part of the project was determined by the availability of funds. But the resulting product, teacher guides with references to student materials, was still not in a form suitable for wide distribution.

Decision 8: Use of summative, control group evaluation

The developers of the Taba curriculum did not feel a summative evaluation was appropriate since the program was still under development. But the Office of Education required a comparison study as part of the project and the staff devoted at least one-third of their effort to the development of testing instruments to measure the outcomes in the curriculum, to administering the tests, and analyzing the results. The tests attempted to measure thinking skills, the goal of the curriculum, but the results of the evaluation study were inconclusive.

Decision 9: Addison-Wesley Publishing Company develops a revised version

Addison-Wesley Publishing Company was scouting for a social studies program. They were impressed with the Taba materials and could not have afforded to develop a program which had undergone as extensive tryouts and revisions as the Taba program had. They recognized that the key to widespread use and return on investment was in student, not teacher, materials and decided to develop a revised version of the curriculum which would include student materials.

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APPENDIX A

BASIC TIME SCHEDULE FOR THE PROJECT

TABLE 1.1 TIME SCHEDULE

| | 65-66 | 66-67 |
|---|---|---|
| Curriculum<br><br>1-6 | Revise units.<br><br>Begin identification and formulation of informal evaluation devices.<br><br>Consult with content specialists and project teachers. | Revise units: Try out revisions. |
| Curriculum<br><br>7-8 | Develop pilot units.<br>Test partial sequences in pilot classrooms. | Write the year's sequence.<br>Try out the year's sequence. |
| Model | Identify generic features. | Test generic features including other approaches to social studies. |
| Implementation, dissemination, and training | Analyze existing records and literature.<br>Begin "each-one-teach-one" training.<br>Conduct various types of training. Prepare and test training materials for these types. Get data on current dissemination patterns. | Conduct distributed training.<br>Experiment with dissemination teams. Get follow-up data on training.<br>Continue preparation and testing of training and induction materials. |
| Evaluation | Instrument development, formal and informal (for use by teachers) | Continue instrument development and design evaluation study.<br>Formulate and try out informal evaluation devices.<br>Try out the revised tests. |

TABLE 1.1 TIME SCHEDULE (Cont'd.)

| | 67-68 | 68-69 |
|---|---|---|
| Curriculum<br><br>1-6 | Train field testers.<br>Field test the units and evaluation devices, and obtain feedback. | Revise the units and evaluation devices based on feedback.<br>Prepare units, and teacher guides for distribution.<br>Report. |
| Curriculum<br><br>7-8 | Train field testers.<br>Field test year's sequence. | Revise the units.<br>Prepare the units and teacher guides for publication. |
| Model | Test applicability of generic features to other fields. | Report. |
| Implementation, dissemination, and training | Conduct distributed training. Get follow-up data on training. Try out induction materials on sample situations (e.g., parents, groups, school boards, administrators). | Get follow-up data on training.<br>Report. |
| Evaluation | Carry out evaluation study. | Analyze and interpret data.<br>Prepare tests for publication.<br>Report. |

## APPENDIX B

## EXAMPLE OF LEARNING ACTIVITIES

UNIT I

MAIN IDEA: MAN'S WAYS OF LIVING AFFECT, AND ARE AFFECTED BY, THE PHYSICAL AND SOCIAL ENVIRONMENT IN WHICH HE LIVES.

*Organizing Idea: Certain inventions of early man revolutionized his way of life.*

| Notes to the Teacher | Learning Activities |
|---|---|
| Diagnosis<br><br>Developing Concepts This task requires that students have the opportunity to group a number of items and to label the groups formed. Do not give them a label. The important point is that the students see the relationship between items and recognize that the same items can be grouped in many ways, not not that they be given a term for such groupings.<br><br>It is through this process of listing, grouping, and labeling that concept development is facilitated and a basis laid for other thinking skills. (See introductory material for a full statement on this task.)<br><br>Evaluation follows Opener. | Opener<br><br>Use *Exploring the Old World*, (Hamer), p. 31. Ask the class to observe carefully each of the small pictures.<br><br>Let them work in pairs to select one of the pictures and list what men would have to know and/or believe before the activity in the picture would likely have developed (for example, have to have some form of writing, have a desire for goods which others possess, etc.).<br><br>From their papers write their suggestions on the chalkboard and let them practice grouping in different ways. |

APPENDIX C

EXAMPLE OF AN EVALUATION EXERCISE

UNIT I

MAIN IDEA: MAN'S WAYS OF LIVING AFFECT, AND ARE AFFECTED BY, THE PHYSICAL AND SOCIAL ENVIRONMENT IN WHICH HE LIVES.

*Organizing Idea: Certain inventions of early man revolutionized his way of life.*

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Evaluation Exercise

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Opener

Developing Concepts

This exercise dealing with what men would have to know and/or believe, may be used by teachers to measure in a preliminary way the extent to which students are achieving Objectives 1 and 16. Since the exercise is aimed at drawing a wide variety of ideas from the students and at helping them organize these in a systematic way, an important criterion is

Flexibility Note the number of valid changes that are made to groups and labels by individuals when they are asked to suggest, or write down, other ways they might be grouped and/or labeled. Then,

a) Group (and note the names of students in it) responses that have three or more valid changes.

b) Group those with two changes

c) Group all other responses. (This group could be subdivided into "one change" and the rest, if there were, say, 10 or more who made one change and say, 5 or more who made no changes.)

Abstractness of Labels The extent to which the group labels are expressed as qualities rather than as concrete items which can be experienced by the senses, e.g., "Desires " would be abstract, and so would "Transportation " and "Communication," whereas a label like "Tools " would be relatively concrete.

a) Group all responses which have three or more abstract labels in them.

b) Group all responsen which have two accurate abstract labels in chem.

c) Group all the rest.

A variation of this way of categorizing responses may be necessary, if all labels are abstract and accurate. In this case, group those labels that most effectively sum up the essence of the grouped items below them and put all the rest in another group.

Possible Use of Results

1. Prepare a list of students' names and column headings of Flexibility and Abstractness (leaving space for other headings to be added for other exercises) and note the group into which each individual's response fell, e.g., Top, Middle, Bottom or 1, 2, and 3. Where a two-group division is made, you might use Top and Rest.

2. Comparisons in the composition of top and bottom groups should be made between this exercise and similar ones later in the year.

APPENDIX D

LIST OF PRODUCTS AND DEVELOPERS

The following is a list of products for which Product Development Reports have been prepared.

Arithmetic Proficiency Training Program (APTP)
Developer: Science Research Associates, Inc.

The Creative Learning Group Drug Education Program
Developer: The Creative Learning Group
Cambridge, Massachusetts

The Cluster Concept Program
Developer: The University of Maryland,
Industrial Education Department

Developmental Economic Education Program (DEEP)
Developer: Joint Council on Economic Education

Distar Instructional System
Developer: Siegfried Engelmann & Associates

Facilitating Inquiry in the Classroom
Developer: Northwest Regional Educational Laboratory

First Year Communication Skills Program
Developer: Southwest Regional Laboratory for
Educational Research & Development

The Frostig Program for Perceptual-Motor Development
Developer: The Marianne Frostig Center of Educational Therapy

Hawaii English Program
Developer: The Hawaii State Department of Education
and The University of Hawaii

Holt Social Studies Curriculum
Developer: Carnegie Social Studies Curriculum Development Center,
Carnegie-Mellon University

Individually Prescribed Instruction--Mathematics (IPI--Math)
Developer: Learning Research and Development Center,
University of Pittsburgh

Intermediate Science Curriculum Study
Developer: The Florida State University,
Intermediate Science Curriculum Study Project

MATCH--Materials and Activities for Teachers and Children
Developer: The Children's Museum
Boston, Massachusetts

Program for Learning in Accordance With Needs (PLAN)
Developer: American Institutes for Research and
Westinghouse Learning Corporation

Science--A Process Approach
Developer: American Association for the Advancement of Science

Science Curriculum Improvement Study
Developer: Science Curriculum Improvement Study Project
University of California, Berkeley

Sesame Street
Developer: Children's Television Workshop

The Sullivan Reading Program
Developer: Sullivan Associates
Menlo Park, California

The Taba Social Studies Curriculum
Developer: The Taba Social Studies Curriculum Project
San Francisco State College

The Talking Typewriter or
The Edison Responsive Environment Learning System
Developer: Thomas A. Edison Laboratory,
a Subsidiary of McGraw Edison Company

Variable Modular Scheduling Via Computer
Developer: Stanford University and
Educational Coordinates, Inc.